HOLOPHANE

DATALOG

Holophane
Trade Mark

375-L

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HOLOPHANE

DATALOG

A COLLECTION OF
FACTS

Defining the Term "Fact": "An occurrence, quality or relation, the reality of which is manifest in experience or may be inferred with certainty . . . as distinguished from imagination, speculation or theory" ★ . . . This datalog justifies both its title and its value by being a book of facts . . . Every statement is an actuality — supported by scientifically-proven facts — and reinforced by Holophane's wide experience over 38 years of progressive lighting development.

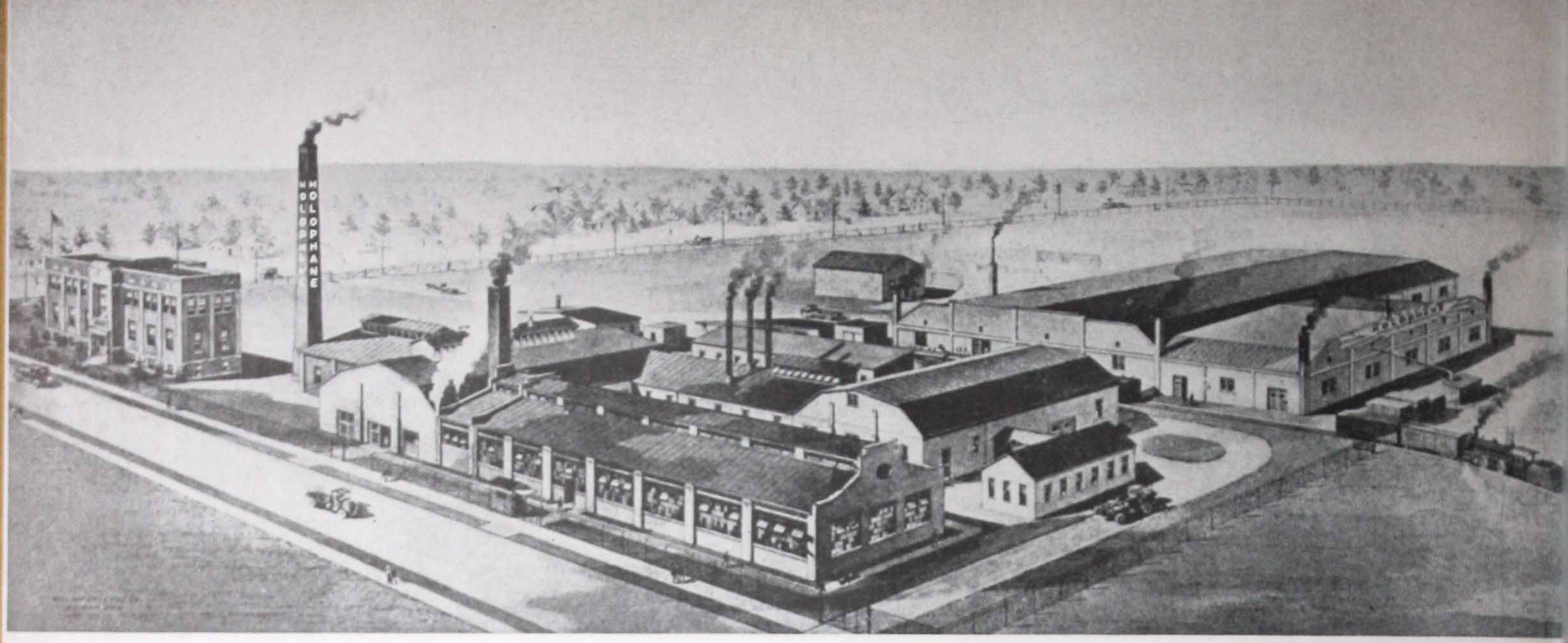
HOLOPHANE COMPANY
Incorporated

342 MADISON AVENUE • NEW YORK

Works: Newark, Ohio

Holophane
Trade Mark

★
"The semblance of two regions, one pure fact, the other pure fancy; one all science, the other all nescience, is just the error I have been trying to expose.—James Ward."



The Holophane Plant—Newark, Ohio

Engineering Policy . . . .

The engineering policy of the Holophane Company has been consistent for a period of over thirty-five years. The test of these years proves this policy to be sound.

Holophane believes in and practices *Planned Lighting*. Planned Lighting requires that lighting equipment be designed for specific application.

Devices so designed are called *Specifics*—they are accurately built to meet definite lighting requirements.

Proper arrangement of Holophane Specifics over an area to be lighted gives **Holophane Planned Lighting—best illumination at least cost.**

Since the satisfactory use of Specifics requires planning in advance of installation, the Holophane Company maintains a competent corps of Engineers who may be called upon to draw complete illumination specifications for any lighting project.

These specifications are furnished without charge and there is no obligation on the part of the client to purchase equipment.

Holophane Engineering service is not offered in substitution for, or in competition with the professional services of Architects or Engineers. Its service is usually rendered through the Architect or Engineer to his client and is supplementary to their advice.

For almost FOUR DECADES HOLOPHANE *has Pioneered Lighting Progress . . . .*

Basic Principles . . . .

The difference between Holophane and other lighting equipment is that Holophane engineers have made a study in detail of all the various lighting applications and instead of offering standardized reflectors or enclosing globes to spray total areas with light, have developed a series of specific units delivering the most suitable light pattern for the area or process involved. The result is greater intensities of illumination for reasonable current expenditure and equipment mechanically suited for the use to which it is put.

OUTPUT EFFICIENCY

The reflecting efficiency of an optical prism is the greatest of any known medium being 99.4% plus. This is the secret of Holophane's **High Initial Efficiency.**

UTILIZATION EFFICIENCY

Holophane offers unique additional advantages in the utilization of light. The application of the natural laws of total reflection and refraction makes possible the design of units with light patterns that are scientifically fitted to the particular surfaces to be illuminated—more light where it is needed—HIGH UTILIZATION EFFICIENCY.

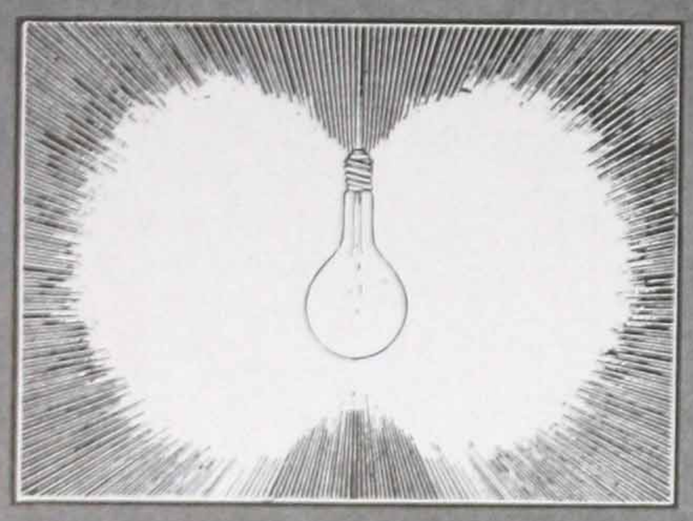
PERMANENT EFFICIENCY

Glass is the most permanent substance that can be worked into useful shapes. Articles made of glass have been found in a state of perfect preservation in excavations of ancient ruins. Crystal glass units alone suffer **no permanent depreciation** when subjected to heat, fumes, acids, gases, moisture and time.

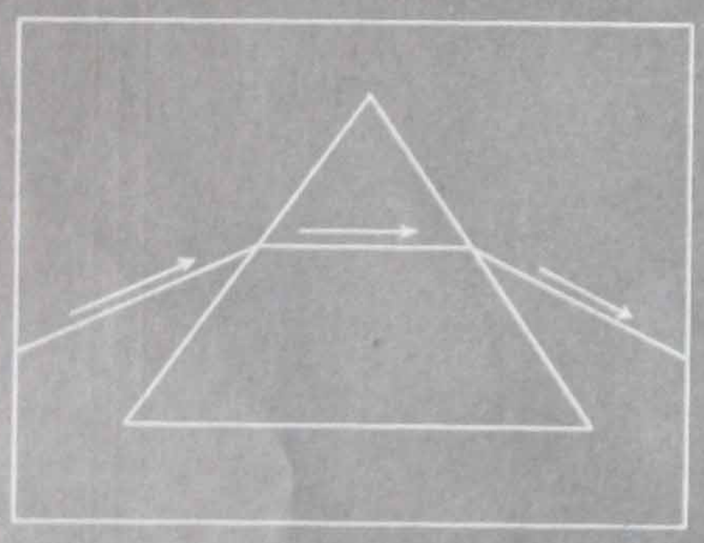
COLOR VALUE

Of all the materials from which reflectors and enclosing globes can be made, crystal glass alone **reflects light in its true color.** All other substances permit selective absorption thereby coloring the light to a more or less degree. It is important to have light of good color value.

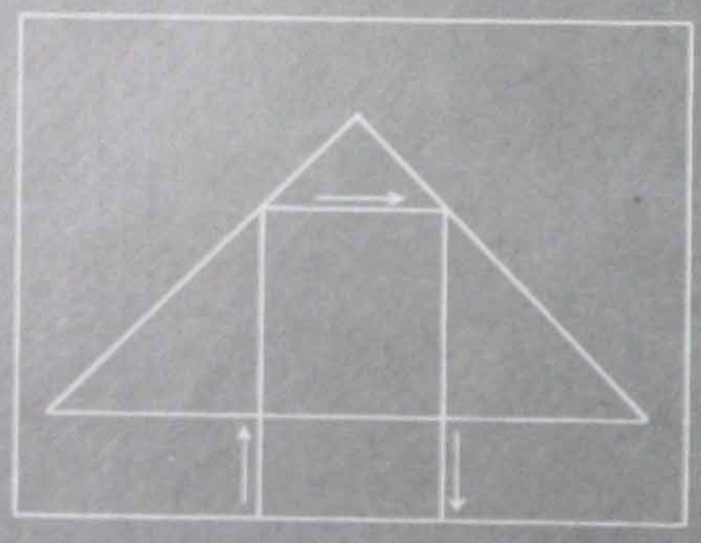
Bare lamps give an uncontrolled and wasteful distribution of light like this:–



The most exact means for controlling direction of light is the glass prism. When a ray of light enters or leaves a glass prism it is bent something like this:–



By varying the shape of the prism and its relative position to the lamp filament, light can be sent in any desired direction. In fact, as shown below:–



–the prism can be made to bend the ray so that it travels directly backward.

CONTROL OF LIGHT •

The name HOLOPHANE has always been synonymous with high efficiency in light control. Such recognition lies in the sound fundamental principles used in the design and manufacture of Holophane lighting equipment. The exceptional ability of Holophane to control light and to direct it can be easily appreciated when thought is given to the simple yet effective means employed.

Uncontrolled distribution of light is wasteful—

1. Because half of the light is transmitted upward at non-useful angles; much of which is lost.

2. Because a large part of the other half (the downward light) is not directed at proper angles to reach the work area.

3. Because too high a percentage of the light reaches the eye direct resulting in glare and making it difficult to see.

Bare lamps are seldom used now but there are many lighting fixtures which are little if any better than bare lamps in light directing characteristics. An enclosing globe of uniform texture, for example, does not redirect light. It merely diffuses or scatters it in all directions. It may be pleasing in appearance but it does not improve the lighting value. The light has been diffused but the distribution has not been controlled.

The most exact means known to science for controlling the direction of light is the glass prism. When a ray of light enters or leaves a glass prism it is bent at an angle depending on the angle of the prism and the angle of striking the glass.

There are definite physical laws which govern these angles of light ray bending (called refraction) well known to science and to Holophane lighting specialists. By varying the shape of the prism and the relation in position of this prism to the lamp filament, light can be directed in any desired direction. The prism can be made to bend the light ray so that it travels directly backward.

This is called "total reflection" and such prisms in Holophane units divert the light from non-useful to useful directions. Careful and precise engineering and manufacture enable Holophane to design prisms which will turn back more of the light rays than by any other method. Since it is not desirable to make this reflection total, in the the design of reflector units a small portion of the ray is

permitted to pass through the prism to relieve contrast and to provide adequate diffusion.

Every Holophane unit employs these principles and utilizes prismatic designs to obtain the types of units and the distribution of light shown in this catalog.

It is important to realize that REFLECTION and REFRACTION are accomplished INSIDE the glass prism and **not by exposed surface** action. The efficiency of a surface reflector depends on the permanence of the reflecting surface. If the surface deteriorates, the efficiency suffers proportionately and PERMANENTLY.

Since the redirecting action takes place on the **inner face** of the prism sides, dust which falls on the outside of these prism faces DOES NOT IMPAIR THE LIGHT-REFLECTING QUALITIES.

The inside surface of the lighting unit provides an entirely smooth surface from which dust is easily removed. Every time a Holophane unit is cleaned* it regains its initial efficiency.

In the application of these prismatic control functions there is always a definite pre-determination of the distribution of light from Holophane units.

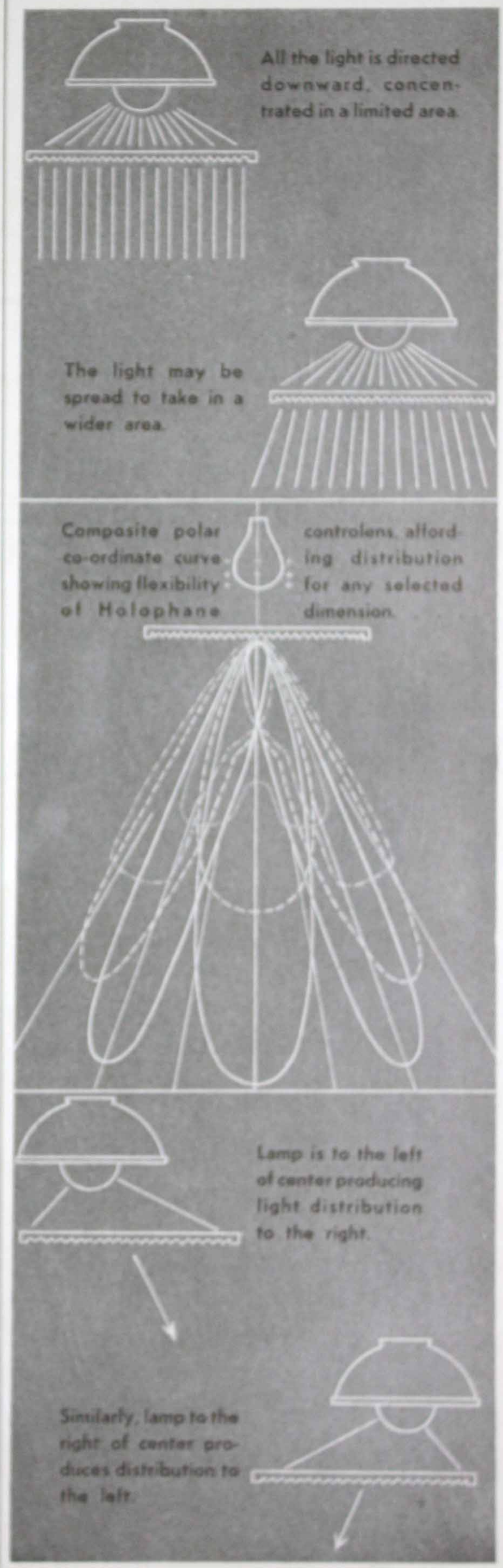
(a) In open-mouthed Holophane reflectors, the proper curvature and the correct prism shape combine to determine the precise distribution.

(b) In enclosed Holophane units, the light pattern is determined by a refracting member that concentrates or extends the light—depending on the area to be illuminated and the particular lighting need.

(c) The prismatic refracting member may be a flat or convex, round or rectangular Holophane Controlens which receives the light from a prismatic reflector and redirects it to the required distribution. The resultant beam may be concentrating or wider spread. It may be symmetric or asymmetric in pattern. It may be directly downward or at a predetermined angle.

This ability to arrive at a calculated distribution assures the greatest amount of light for the purpose, the lowest operating expenditures, and permanent satisfaction for the users.

*Use "Oakite" and water solution.



HOLOPHANE In-Bilt

• *The Modern Way to Light*

NATURAL lighting comes from built-in devices, windows and skylights. So does artificial lighting * * * with the new Holophane "In-Bilt."

The Holophane Controlens takes the light from the reflector and lamp, "gathers" it together into the exact spread needed, and distributes it, strongly reinforced, to the proper places. Glare is eliminated because the scattering, high angle light is bent from useless, glare-causing paths, into useful directions.

Because a lens is an optical instrument of scientific precision, best results follow when it is used with a prismatic reflector, correctly designed, forming an "optical train." Such lighting can be designed to just suit every need.

"In-Bilt" lighting has the following advantages over other types:

(*a*) "In-Bilt" is the New Trend in lighting. The best new installations throughout the country are built in. It is modern because it is based on advanced principles of lighting science.

(*b*) "In-Bilt" can be used on high or low ceilings with equal effectiveness.

(*c*) "In-Bilt" does not depend on the color or finish of the ceiling for its efficiency.

(*d*) "In-Bilt" has practically no dirt and dust depreciation.

(*e*) "In-Bilt" is economical of current consumption.

(*f*) "In-Bilt" effectively eliminates glare.

(*g*) "In-Bilt" gives excellent color value. Even better color value can be secured by using daylight blue Controlenses.

(*h*) With "In-Bilt" the interior is not broken up by hanging fixtures and therefore has a clean, orderly spacious appearance.

(*i*) With "In-Bilt" relamping is simplified as there is nothing to take apart or remove.

(*j*) "In-Bilt" is most flexible both as to wattage and dimensions and arrangement of equipment.

This data will permit the presentation of a preliminary proposal. If acceptable in principle, a complete detailed specification covering the engineering features can be prepared from this data by the Holophane Engineering Department and accurate costs can be submitted.

APPLICATION:

Use: IN-BILT lighting has three general uses:

1. **General Lighting** in place of obsolete hanging fixtures.
2. **Plus Lighting** to reinforce existing general lighting, and at special places, such as:

   store counters
   office desks
   office machines
   switchboards
   benches and machines
   in industry, et al.

3. **Special Lighting** to light difficult places:

   brokers' boards
   blackboards
   exhibits
   art galleries
   operating tables
   and so on.

TYPES:

In general there are three separate types of units classified according to installation methods:

1. **Flush Units**—where the equipment is entirely recessed into the ceiling, (See pages 7 and 8). This type is generally chosen for installation in false ceilinged locations and where an unbroken ceiling line effect is desired.

   The units are constructed in two sections:

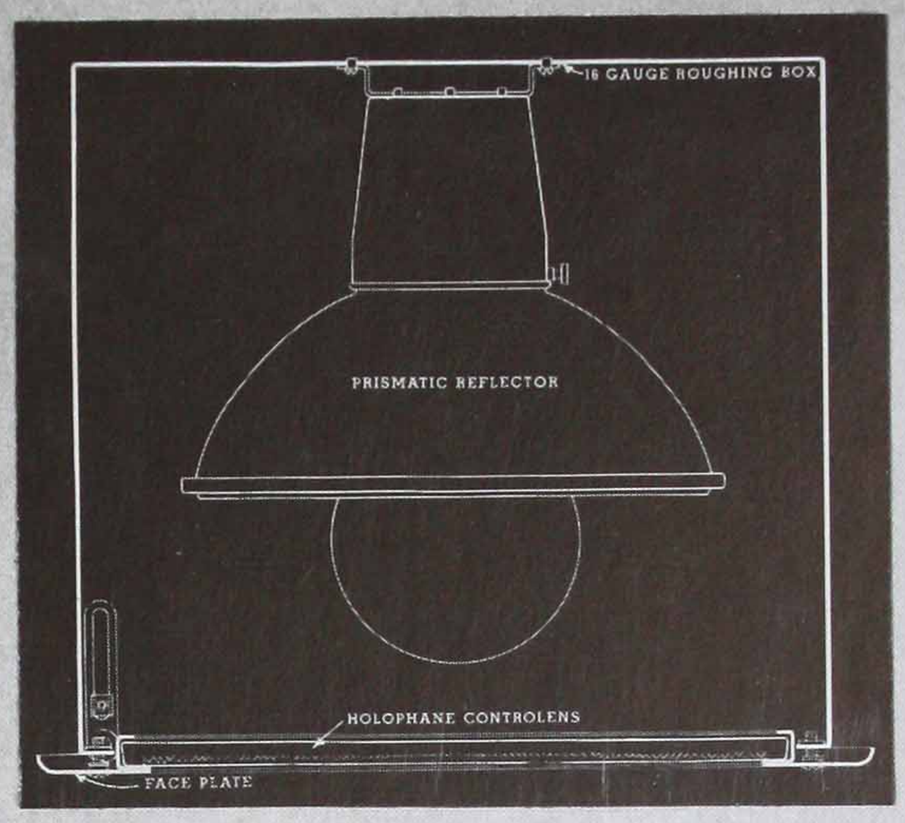
   A roughing box containing reflector, sockets, and necessary supporting devices. This portion is entirely recessed in the ceiling.

   A face plate which holds the Controlens. This fastens to the roughing box by special concealed hinges and screws and frames the plaster opening at the plaster line.

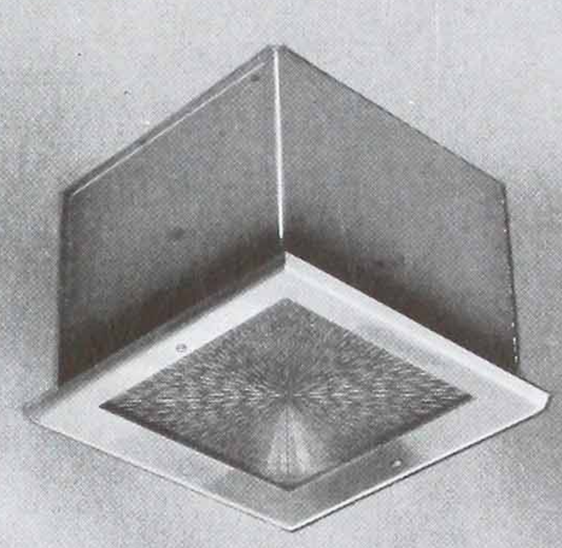
   Lamps in these units are burned either vertically or horizontally depending on the depth of the roughing boxes.

2. **Semi-Exposed**—where a part of the unit is recessed and the remainder is exposed (See page 9). This type is chosen generally because of a lack of sufficient depth in ceiling for complete recessing or the desire for more ornamentation in the lighting system.

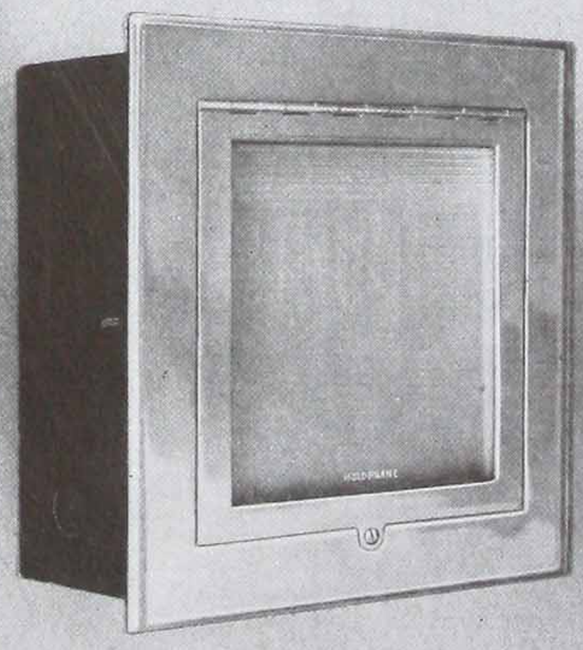
TYPICAL UNITS FOR FLUSH INSTALLATION



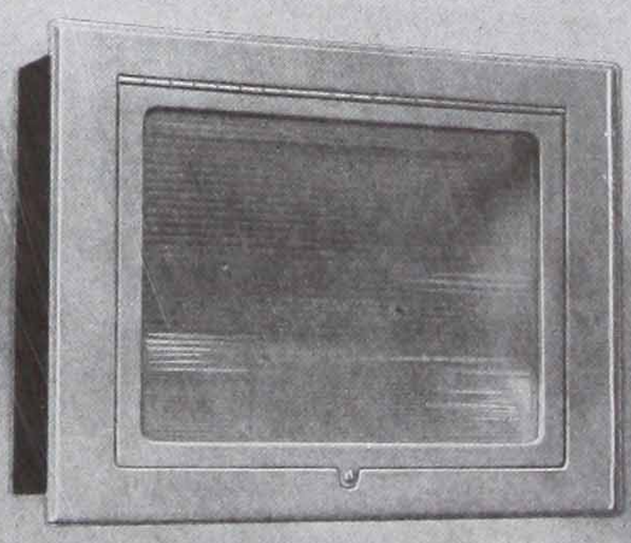
Typical Section - Deep Flush IN-BILT unit



TYPICAL FOR
Nos. H-765-FL
B-765-FL
H-774-FL
B-774-FL

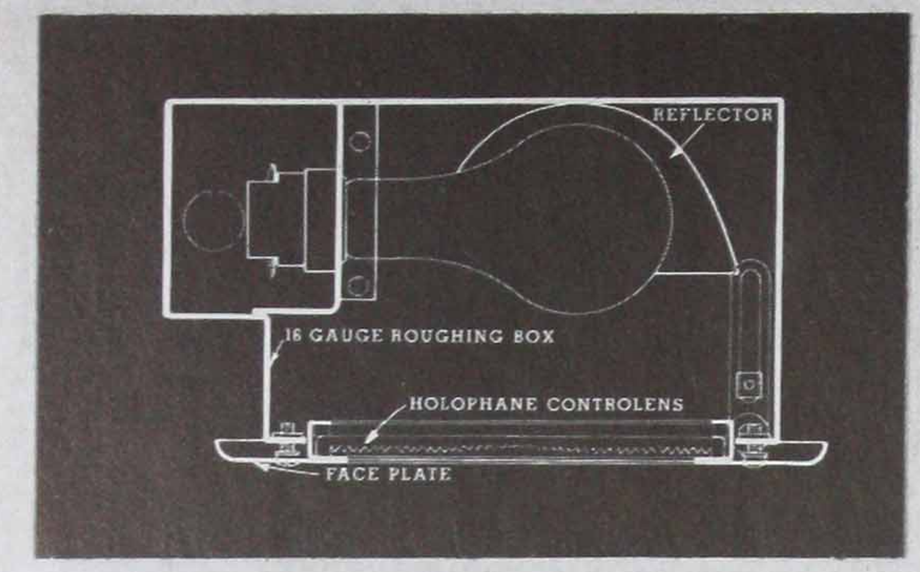


No. W-792

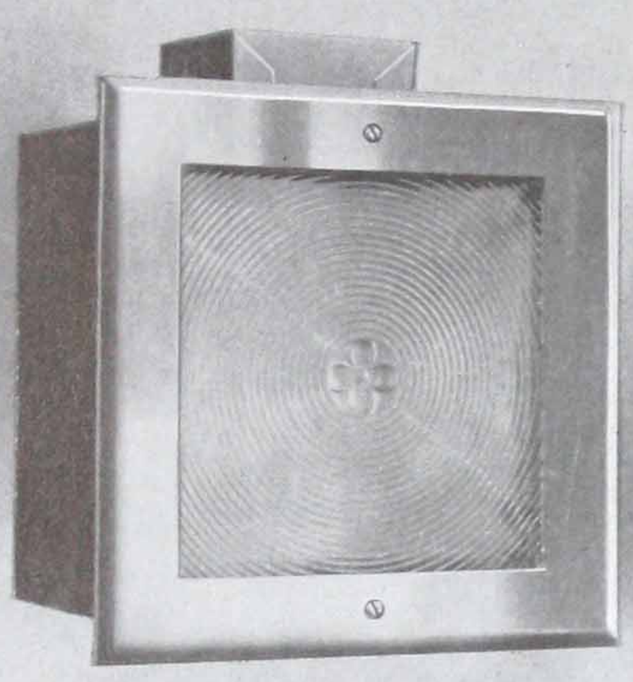


No. W-794

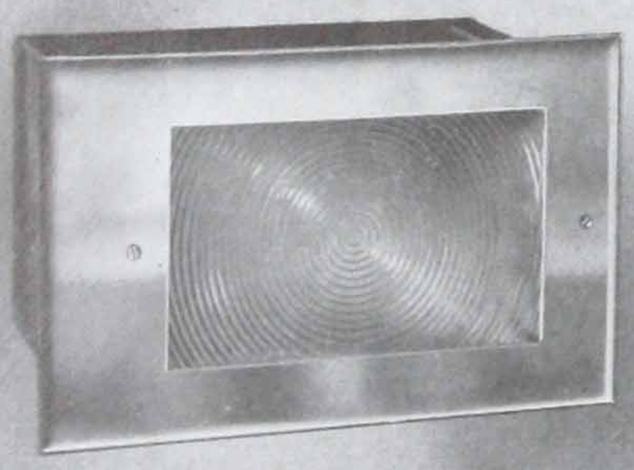
TYPICAL UNITS FOR FLUSH INSTALLATION



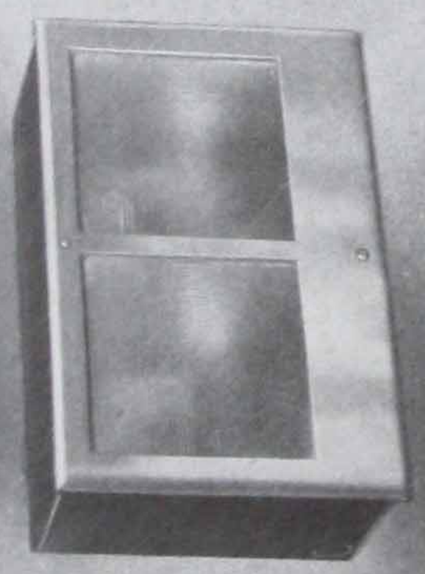
Typical Shallow IN-BILT unit



TYPICAL FOR
W-745-1
W-789-1
W-796-1



B-744-F



TYPICAL FOR
H-745-2F and H-789-2F
H 790-2F and H 796-2F

- **HOLOPHANE IN-BILT**

TYPES—Continued

The two piece construction previously described under FLUSH UNITS is provided and is recommended to facilitate installation and maintenance but one piece construction is also available. The face plate holding the Controlens is extended to include the side glass panels which extend below the ceiling line.

3. **Exposed Units**—where the equipment is mounted directly on the ceiling with no part or only an outlet box being recessed (See page 9). This type is used generally where recessed construction is not structurally possible. It provides a fine opportunity for ornamentation of varying degrees.

ORNAMENTATION:

Ornamentation may be applied to any of the designs shown in the following sketches in a number of different ways. Louvers and fins of all sizes and shapes may be added to the exposed and semi-exposed unit at will. Plated finishes or colored spray finishes of all kinds are available. The design of the face plates can be easily altered to include a border or borders of contrasting glass. Many stock moulding frames are available for decorative treatment of the metal work.

OPTICAL CHARACTERISTICS:

In the design of the "IN-BILT" units illustrated herewith three general optical types are shown:

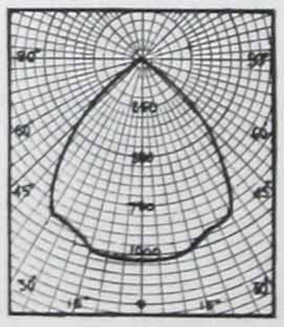
1. Where the lamp is vertical with a prismatic reflector a variable light distribution is possible.
2. With lamp vertical, prismatic reflector but fixed lamp position and resultant fixed light distribution.
3. Lamp horizontal and with small chromium plated reflector.

It is always desirable to have the lamp burn vertical and to use a prismatic reflector because:

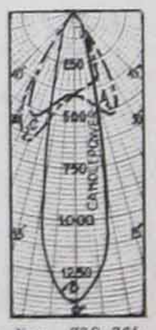
1. A higher output and more effective utilization results.
2. The Controlens presents a better appearance due to more uniform distribution of light over its surface by the reflector and the lighted background.
3. More satisfactory lamp operation.
4. More accurate light control.

Nos. 744, 745-VF, 789-VF, 774-VF, 739 and 765 used for general or special lighting.

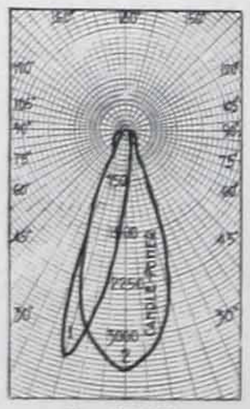
Nos. 744-745VF and 789VF



No. 774-VF

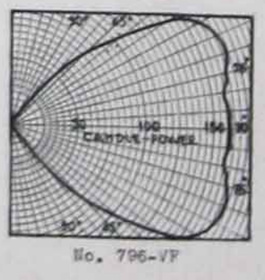


Nos. 739-765



No. 790-VF

The lamp position behind the Controlens can be arranged to produce any light distribution varying from A to B or C as indicated in the distribution curves above except in the case of No. 774VF lens where the distribution is fixed.



No. 796-VF

Nos. 790-VF and 796-VF for special application

WATTAGE CALCULATIONS:

For practical purposes of estimating the wattage required for an installation of "IN-BILT" lighting the following efficiency figures can be used.

(a) For general lighting using "IN-BILT" with Holophane fixed reflectors over the Controlens, 8 foot-candles for each watt per square foot of floor space will be secured; with variable prismatic reflectors 7 foot-candles, per watt per square foot.

(b) When polished metal reflectors are used 5 foot-candles for each watt per square foot of floor space will be secured.

(c) For local lighting (such as counters in a jewelry store or wall maps, etc.) figure on 15 candlepower for each watt and divide the total candlepower by the square of the distance from the work to the Controlens. The result will be the approximate foot-candles. For example—150 watt lamp over a Controlens is mounted 7′ above a counter. The foot-candles on the counter will be $\frac{150 \times 15}{49} = 46$

CONTROLENS SIZES:

Controlenses for "IN-BILT" lighting are available in four sizes:

4″ x 6″ and 6½″, 8½″ and 12″ square.

4″ x 6″ size: 744.

6½″ square size: No. 745-VF; 789-VF; 790-VF; 796-VF.

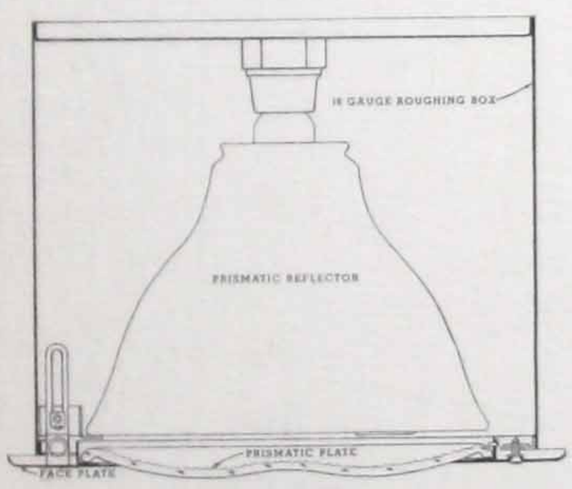
8½″ square size: No. 739.

12″ square size: No. 765; 774-VF.

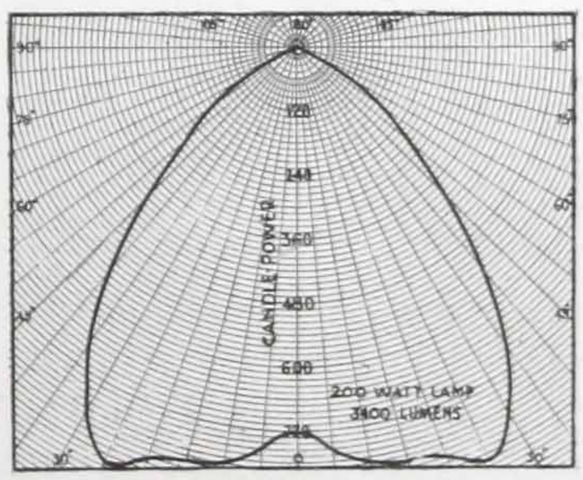
With VF lenses use clear lamps. With clear lenses use inside frost lamps.

FLEXIBILITY OF DISTRIBUTION:

These Controlenses have variable light distributions that can be arranged between the limits shown on the distribution curves shown foot of page 8.



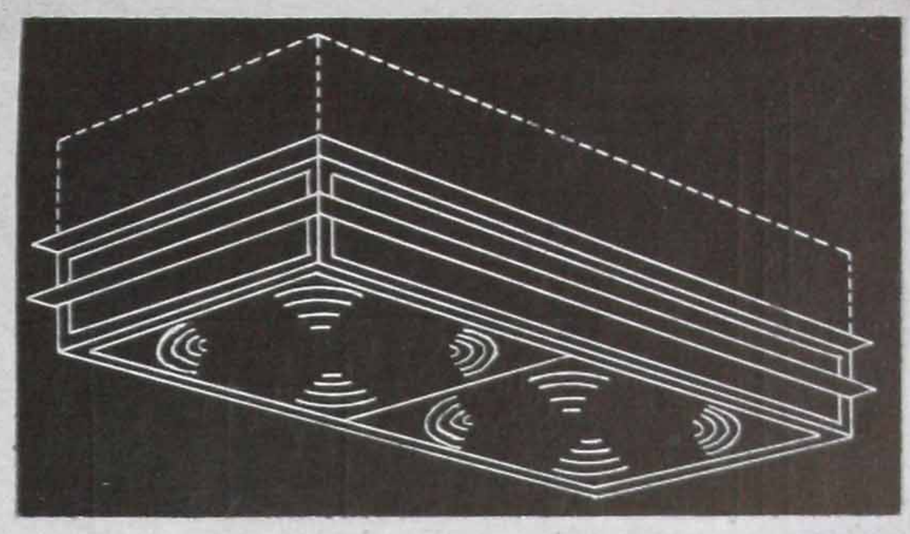
Sectional View



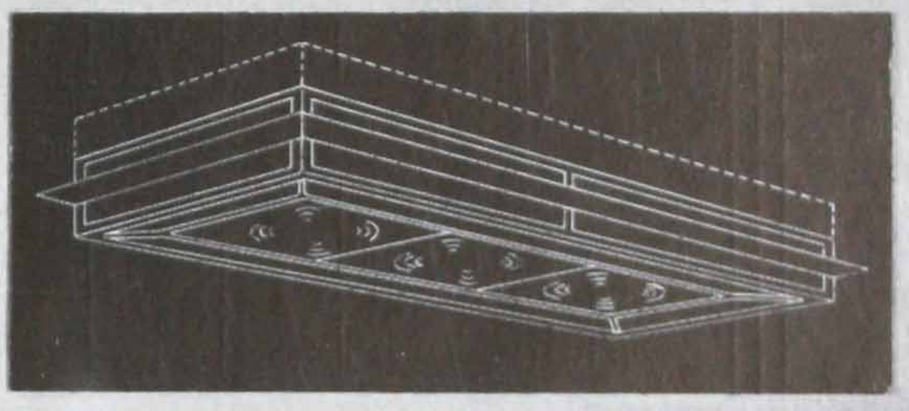
Characteristic Curve

Typical Round Unit For In-Bilt Lighting

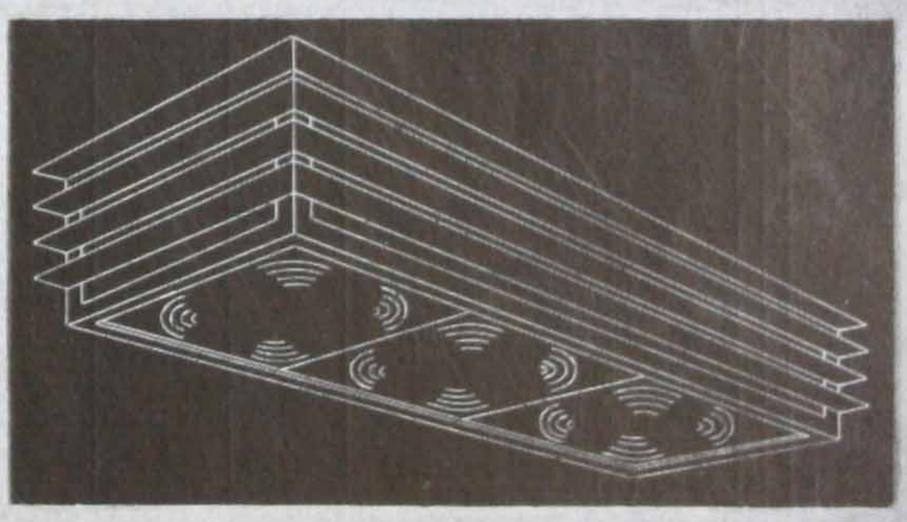
TYPICAL UNITS - SEMI-EXPOSED - EXPOSED



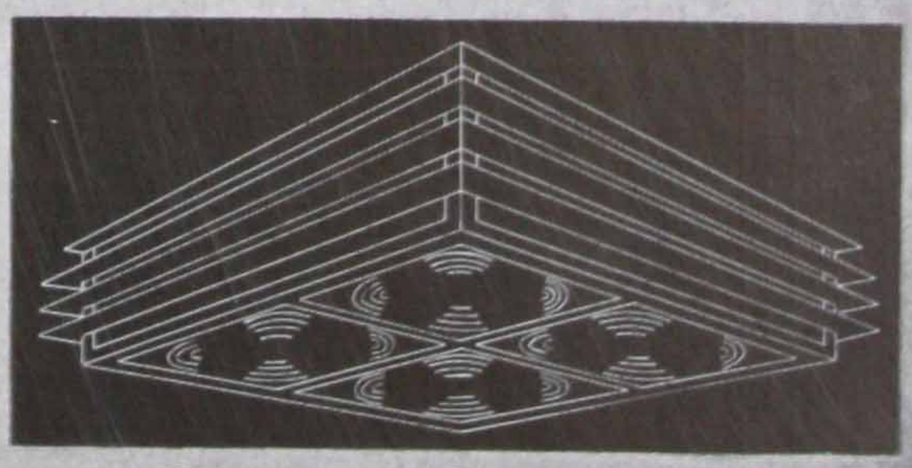
Typical Semi Exposed double IN-BILT unit



Typical Semi-Exposed triple IN-BILT unit



Typical Exposed triple IN-BILT unit



Typical Exposed square IN-BILT unit

FLUSH UNITS

	Unit Cat. No.	Controlens: Lenses in Unit	Controlens: Lens Cat. No.	Max. Watts Per Lens	Dimensions in Inches: Roughing Box Length	Roughing Box Width	Roughing Box Depth	Face Plate Length	Face Plate Width	Plaster Opening Length	Plaster Opening Width	Shipping Weight Lbs.	Estimating Prices—List Sch. "L": Frames Hinged	Frames Unhinged
					4″ x 6″ CONTROLENS									
*	B-744-F	1	744	60	8 3/8	5 1/4	4 1/2	9 3/8	6 3/8	8 7/8	5 3/4	5 1/2	$11.00	.....
					6 1/2″ SQ. CONTROLENS									
*	W-745-1	1	745-VF	100	9 3/8	8 1/4	5 1/4	9 5/8	9 5/8	8 3/4	8 3/4	10	11.50	.....
*	W-789-1	1	789-VF	100	9 3/8	8 1/4	5 1/4	9 5/8	9 5/8	8 3/4	8 3/4	10	11.50	.....
(c)	W-792	1	792	25-T6 1/2	7 7/8	7 7/8	3 1/4	8 7/8	8 7/8	8 3/8	8 3/8	7	10.50	.....
*	W-796-1	1	796-VF	100	9 3/8	8 1/4	5 1/4	9 5/8	9 5/8	8 3/4	8 3/4	10	11.50	.....
*	H-745-2F	2	745-VF	100	14 3/8	9 1/4	5 1/2	15 3/4	10 3/4	14 3/4	9 3/4	23	16.00	.....
*	H-789-2F	2	789-VF	100	14 3/8	9 1/4	5 1/2	15 3/4	10 3/4	14 3/4	9 3/4	23	16.00	.....
*	H-796-2F	2	796-VF	150	14 3/8	9 1/4	5 1/2	15 3/4	10 3/4	14 3/4	9 3/4	23	16.00	.....
*	H-790-2F	2	790-VF	150	14 3/8	9 1/4	5 1/2	15 3/4	10 3/4	14 3/4	9 3/4	23	19.00	.....
					8 1/2″ SQ. CONTROLENS									
*	H-739-FL	1	739	150	10 1/4	10 1/4	9 7/8	11 5/8	11 5/8	10 3/4	10 3/4	23	16.00	.....
*	HF-739-FL	1	739	150	10 1/4	10 1/4	4 1/2	11 5/8	11 5/8	10 3/4	10 3/4	23	14.00	.....
(a)	H-739-2FL	2	739	150	18 3/4	10 1/4	9 7/8	20 1/4	11 3/4	19 1/4	10 3/4	38	31.00	23.00
(a)	H-739-3FL	3	739	150	27 1/4	10 1/4	9 7/8	28 3/4	11 3/4	27 3/4	10 3/4	57	40.50	30.00
(a)	H-739-4FL	4	739	150	35 3/4	10 1/4	9 7/8	37 1/4	11 3/4	36 1/4	10 3/4	76	50.00	37.00
(a)	H-739-4FLS	4	739	150	19 5/16	19 5/16	9 7/8	20 13/16	20 13/16	19 13/16	19 13/16	70	43.00	37.50
					12″ SQ. CONTROLENSES									
(c)	W-794	1	794	150-T	15	11	4 1/8	16	12	15 1/2	11 1/2	20	18.00	.....
*	HF-765-FL	1	765	200	14	14	7 3/4	15 3/8	15 3/8	14 1/2	14 1/2	35	17.00	.....
*	H-765-FL	1	765	200	14	14	12 1/4	15 3/8	15 3/8	14 1/2	14 1/2	36	20.00	.....
(a)	H-765-2FL	2	765	200	25 3/4	13 3/4	12 1/4	27 1/4	15 1/4	26 1/4	14 1/4	60	39.00	33.00
(a)	H-765-3FL	3	765	200	37 3/4	13 3/4	12 1/4	39 1/4	15 1/4	38 1/4	14 1/4	84	52.00	44.00
(a)	H-765-4FL	4	765	200	49 3/4	13 3/4	12 1/4	51 1/4	15 1/4	50 1/4	14 1/4	108	65.50	56.00
(a)	H-765-4FLS	4	765	200	26 3/8	26 3/8	12 1/4	27 7/8	27 7/8	26 7/8	26 7/8	198	60.00	50.50
*	B-765-FL	1	765	300	14	14	13 3/8	15 3/8	15 3/8	14 1/2	14 1/2	41	21.00	.....
*	BF-765-FL	1	765	300	14	14	7 3/4	15 3/8	15 3/8	14 1/2	14 1/2	28	18.00	.....
(a)	B-765-2FL	2	765	300	25 3/4	13 3/4	13 3/8	27 1/4	15 1/4	26 1/4	14 1/4	68	41.00	35.00
(a)	B-765-3FL	3	765	300	37 3/4	13 3/4	13 3/8	39 1/4	15 1/4	38 1/4	14 1/4	95	55.00	47.00
(a)	B-765-4FL	4	765	300	49 3/4	13 3/4	13 3/8	51 1/4	15 1/4	50 1/4	14 1/4	122	69.50	60.00
(a)	B-765-4FLS	4	765	300	26 3/8	26 3/8	13 3/8	27 7/8	27 7/8	26 7/8	26 7/8	110	64.00	54.50
*	H-774-FL	1	774-VF	200	14	14	10 3/4	15 3/8	15 3/8	14 1/2	14 1/2	41	20.00	.....
(a)	H-774-2FL	2	774-VF	200	25 3/4	13 3/4	10 3/4	27 1/4	15 1/4	26 1/4	14 1/4	68	43.00	37.00
(a)	H-774-3FL	3	774-VF	200	37 3/4	13 3/4	10 3/4	39 1/4	15 1/4	38 1/4	14 1/4	95	58.00	50.00
(a)	H-774-4FL	4	774-VF	200	49 3/4	13 3/4	10 3/4	51 1/4	15 1/4	50 1/4	14 1/4	122	73.50	64.00
(a)	H-774-4FLS	4	774-VF	200	26 3/8	26 3/8	10 3/4	27 7/8	27 7/8	26 7/8	26 7/8	110	68.00	58.50
*	B-774-FL	1	774-VF	300	14	14	11 7/8	15 3/8	15 3/8	14 1/2	14 1/2	45	21.00	.....
(a)	B-774-2FL	2	774-VF	300	25 3/4	13 3/4	11 7/8	27 1/4	15 1/4	26 1/4	14 1/4	75	43.00	37.00
(a)	B-774-3FL	3	774-VF	300	37 3/4	13 3/4	11 7/8	39 1/4	15 1/4	38 1/4	14 1/4	105	58.00	50.00
(a)	B-774-4FL	4	774-VF	300	49 3/4	13 3/4	11 7/8	51 1/4	15 1/4	50 1/4	14 1/4	135	73.50	64.00
(a)	B-774-4FLS	4	774-VF	300	26 3/8	26 3/8	11 7/8	27 7/8	27 7/8	26 7/8	26 7/8	120	68.00	58.50

CIRCULAR "IN-BILT" UNITS

				Roughing Box Diameter	Roughing Box Depth	Face Plate Diameter	Plaster Opening Diameter			
(b) *	F-2336-C	1	2336	200	12 5/8	10 7/8	14 1/8	13 1/8	25	20.00	.....
(d) *	F-6681-S or C	1	6681	500	17 1/4	13 1/2	18 3/4	17 3/4	50	30.00	.....
(b) *	F-2171	1	2171	150	12 5/8	7 1/2	14 1/8	13 1/8	25	18.00	.....
(b) *	F-2173	1	2173	150	12 5/8	7 1/2	14 1/8	13 1/8	25	18.00	.....
(b) *	F-2181	1	2181	200	14 1/2	8 7/8	16	15	55	23.50	.....

NOTE: Dimensional and price data is for estimating purposes only. Write for actual quotation and construction prints. Prices subject to change without notice.

*Regularly carried in stock. Prompt shipment can be made. Face plate satin nickel finish with invisible hinge construction.

Roughing boxes on all units furnished inside aluminum glyptal lacquer; outside grey baked enamel.

(a) Dimensions shown are for unhinged construction. Shape of flange matches flange on single plate units. Hinged construction uses standard butt hinges with 12 gauge flat flanges. Finish on exposed metal parts of unhinged units, satin nickel; hinged units, grey baked enamel. Shipment requires two weeks.

(b) Circular cast iron plaster ring can be furnished at $2.50 list, Schedule "L".

(c) Cast aluminum face plate. Uses type "T" lamp.

(d) Circular cast iron plaster ring can be furnished at $3.00 list, Schedule "L".

SEMI-EXPOSED UNITS

Unit Cat. No.	Controlens: Lenses in Unit	Controlens: Lens Cat. No.	Max. Watts Per Lens	Dimensions in Inches: Roughing Box Length	Roughing Box Width	Roughing Box Depth	Face Plate Length	Face Plate Width	Face Plate Depth	Plaster Opening Length	Plaster Opening Width	Shipping Weight Lbs.	Estimating Prices* List Sch. "L": Two Piece	Estimating Prices* List Sch. "L": One Piece
					8½" SQ. CONTROLENS									
H-739-SE**	1	739	150	11	11	6	15	15	4	11½	11½	18	**$32.00**	**$27.50**
H-739-2SE	2	739	150	19½	11	6	23½	15	4	20	11½	30	**41.00**	**36.00**
H-739-3SE	3	739	150	28	11	5	32	15	5	28½	11½	46	**52.00**	**46.00**
H-739-4SE	4	739	150	36½	11	4	40½	15	6	37	11½	60	**62.00**	**55.00**
H-739-4SES	4	739	150	19	19	4	23½	23½	6	19½	19½	54	**63.50**	**52.50**
					12" SQ. CONTROLENS									
H-765-SE**	1	765	200	14½	14½	8½	18½	18½	4	15	15	40	**40.00**	**35.50**
H-765-2SE	2	765	200	26½	14½	8½	30½	18½	4	27	15	67	**52.00**	**45.50**
H-765-3SE	3	765	200	38½	14½	7½	42½	18½	5	39	15	105	**65.00**	**57.50**
H-765-4SE	4	765	200	50½	14½	6½	54½	18½	6	51	15	135	**78.00**	**70.00**
H-765-4SES	4	765	200	26½	26½	6½	30½	30½	6	27	27	120	**74.50**	**68.50**
B-765-SE**	1	765	300	14½	14½	10	18½	18½	4	15	15	45	**42.00**	**37.50**
B-765-2SE	2	765	300	26½	14½	10	30½	18½	4	27	15	72	**56.00**	**49.50**
B-765-3SE	3	765	300	38½	14½	9	42½	18½	5	39	15	110	**69.00**	**61.50**
B-765-4SE	4	765	300	50½	14½	8	54½	18½	6	51	15	140	**82.00**	**74.00**
B-765-4SES	4	765	300	26½	26½	8	30½	30½	6	27	27	125	**78.50**	**72.50**
H-774-SE**	1	774-VF	200	14½	14½	7	18½	18½	4	15	15	35	**42.00**	**37.50**
H-774-2SE	2	774-VF	200	26½	14½	7	30½	18½	4	27	15	62	**56.00**	**49.50**
H-774-3SE	3	774-VF	200	38½	14½	6	42½	18½	5	39	15	100	**69.00**	**61.50**
H-774-4SE	4	774-VF	200	50½	14½	5	54½	18½	6	51	15	130	**82.00**	**74.00**
H-774-4SES	4	774-VF	200	26½	26½	5	30½	30½	6	27	27	115	**78.50**	**72.50**
B-774-SE**	1	774-VF	300	14½	14½	8	18½	18½	4	15	15	40	**43.00**	**38.50**
B-774-2SE	2	774-VF	300	26½	14½	8	30½	18½	4	27	15	67	**58.00**	**51.50**
B-774-3SE	3	774-VF	300	38½	14½	7	42½	18½	5	39	15	105	**72.00**	**64.50**
B-774-4SE	4	774-VF	300	50½	14½	6	54½	18½	6	51	15	135	**86.00**	**78.00**
B-774-4SES	4	774-VF	300	26½	26½	6	30½	30½	6	27	27	120	**82.50**	**76.50**

EXPOSED UNITS

Unit Cat. No.	Controlens: Lenses in unit	Controlens: Lens Cat. No.	Max. Watts per Lens	Dimensions in Inches: Length	Width	Depth	Shpg. Weight Lbs.	Estim. Prices† List Sch. "L"
			6½" SQ. CONTROLENS					
W-745-1E‡	1	745-VF	100	9½	8⅜	5	10	**$12.00**
W-789-1E‡	1	789-VF	100	9½	8⅜	5	10	**12.00**
W-796-1E‡	1	796-VF	100	9½	8⅜	5	10	**12.00**
H-745-2‡	2	745-VF	100	14⅝	9⅜	5⅞	20	**16.00**
H-789-2‡	2	789-VF	100	14⅝	9⅜	5⅞	20	**16.00**
H-790-2‡	2	790-VF	150	14⅝	9⅜	5⅞	20	**19.00**
H-796-2‡	2	796-VF	150	14⅝	9⅜	5⅞	20	**16.00**
			8½" SQ. CONTROLENS					
H-739-EL§	1	739	150	15	15	10	35	**27.50**
H-739-2EL	2	739	150	23½	15	10	58	**35.00**
H-739-3EL	3	739	150	32	15	10	88	**45.00**
H-739-4EL	4	739	150	40½	15	10	117	**55.00**
H-739-4ELS	4	739	150	23½	23½	10	105	**52.50**
HF-739-EL§	1	739	150	15	15	6⅛	25	**27.50**
			12" SQ. CONTROLENS					
H-765-EL§	1	765	200	18½	18½	12½	64	**32.50**
H-765-2EL	2	765	200	30½	18½	12½	107	**45.50**
H-765-3EL	3	765	200	42½	18½	12½	160	**58.00**
H-765-4EL	4	765	200	54½	18½	12½	214	**72.00**
H-765-4ELS	4	765	200	30½	30½	12½	190	**70.00**
HF-765-EL§	1	765	200	18½	18½	6⅛	30	**28.50**
BF-765-EL§	1	765	300	18½	18½	6¾	32	**30.50**
B-765-EL§	1	765	300	18½	18½	14	70	**34.50**
B-765-2EL	2	765	300	30½	18½	14	115	**49.50**
B-765-3EL	3	765	300	42½	18½	14	165	**64.00**
B-765-4EL	4	765	300	54½	18½	14	220	**80.00**
B-765-4ELS	4	765	300	30½	30½	14	195	**78.00**
H-774-EL§§	1	774-VF	200	18½	18½	9¼	35	**26.50**
H-774-2EL	2	774-VF	200	30½	18½	12½	107	**49.50**
H-774-3EL	3	774-VF	200	42½	18½	12½	160	**64.00**
H-774-4EL	4	774-VF	200	54½	18½	12½	214	**80.00**
H-774-4ELS	4	774-VF	200	30½	30½	12½	190	**78.00**
B-774-EL§§	1	774-VF	300	18½	18½	12½	69	**27.50**
B-774-2EL	2	774-VF	300	30½	18½	12½	115	**51.50**
B-774-3EL	3	774-VF	300	42½	18½	12½	165	**67.00**
B-774-4EL	4	774-VF	300	54½	18½	12½	220	**84.00**
B-774-4ELS	4	774-VF	300	30½	30½	12½	195	**82.00**

NOTES

SEMI-EXPOSED UNITS

Finish: Exposed parts sprayed, roughing box prime coat.

* Prices based on 1 louver with flange at ceiling and flashed opal side panels on exposed parts. Prices on additional louvers or units less louvers on application.

** These units have hinged frames with regular butt hinges. All other units relamped by sliding Controlens out of position.

EXPOSED UNITS

Finish: Exposed parts sprayed.

† Prices figured on 1 louver and ceiling flange. Prices on additional louvers or units less louvers on application.

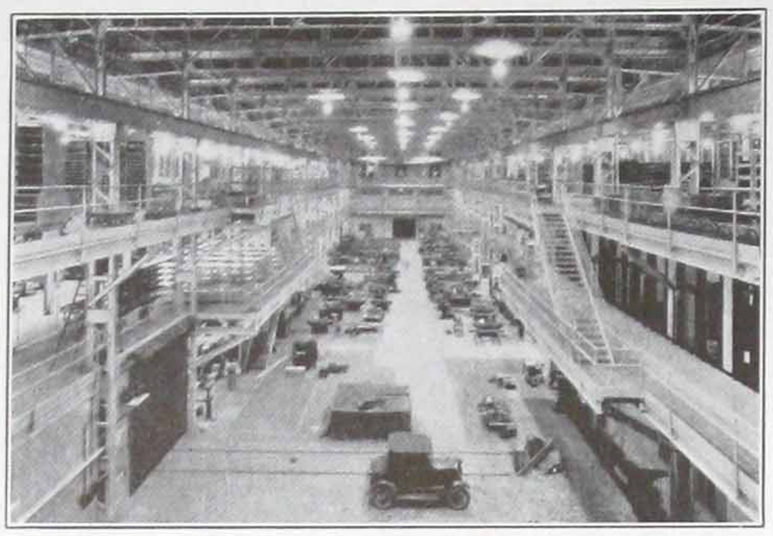
§ These units have hinged door.

§§ These units have hinged door and ceiling flange only—no louver—and are available for prompt shipment.

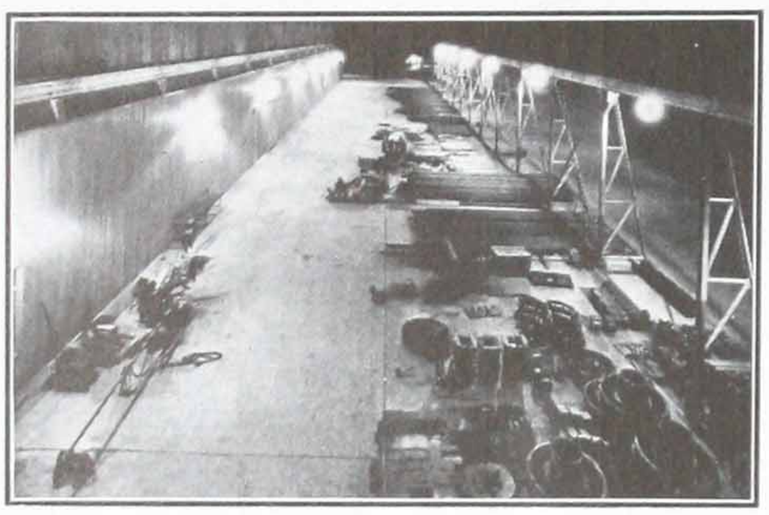
‡ These units have hinged door; no flashed opa side panels and are available for prompt shipment.

The foregoing are list prices, F. O. B. Factory, Newark, Ohio, packing included.

HOLOPHANE Industrial



Hi-Bay units salvage the light usually wasted on side walls and put it on the work



For outdoor lighting the light must be confined to the space to be lighted without glare

Because vapor proof equipment must be used is no reason why the work should not be lighted efficiently

Textile mills require special light distribution to secure effective and economical lighting

Any satisfactory installation of industrial lighting must put the greatest possible amount of light ON THE WORK. Whether the work be on a horizontal or vertical plane, whether it be confined to a localized area or spread over a large surface, the light must be concentrated on the operation to allow the greatest efficiency.

The most efficient lighting in industrial plants cannot be secured by using the same lighting unit for *all* applications. Conditions in one factory are not identical with those in other factories, even of the same industry. Not alone is there great variation in the lighting requirements, but the mechanical requirements for the unit will also vary with different industries. For example, you cannot use the same lighting equipment for steel work as you would employ for the production of rayon.

The Holophane system of industrial lighting is fundamentally opposed to the old-fashioned, "light-the-empty-room" method of lighting. With the Holophane principle, the work in production receives the *first* consideration—receives the major part of the light. The surrounding, non-working areas are illuminated by the spilled light from the lighting equipment. The amount of spill is determined by the relative importance of the surrounding area. . . . The result is good *work* light *plus* the appearance of a uniformly lighted, efficient environment.

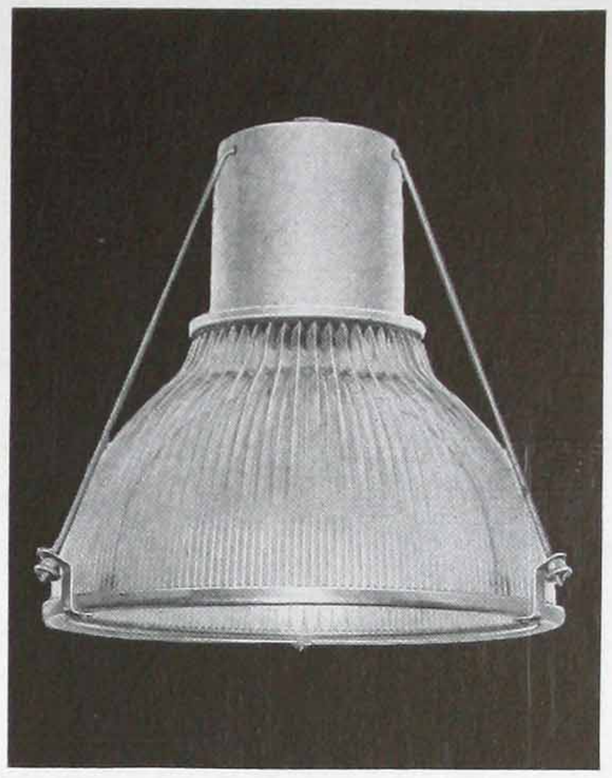
The pages hereafter describe many lighting units by Holophane which are known as SPECIFICS because they have been designed for specific application in various types of industries. However, there are many other types made by Holophane which are not included in this Datalog because of their limited application. The Holophane Engineering Department will make detailed specifications to meet any industrial lighting problem. If necessary, they will design special equipment for the most efficient system of lighting.

All Holophane Industrial Lighting Specifics have the following characteristics:

1. Specific light distribution adapted to each application.
2. The greatest possible utilization efficiency. (The light is directed without waste to the work.)
3. Light that usually causes glare is salvaged and redirected for use on the work.
4. No permanent depreciation.
5. Lowest temporary depreciation (due to dirt and dust).
6. More light for equal cost is the Holophane way.

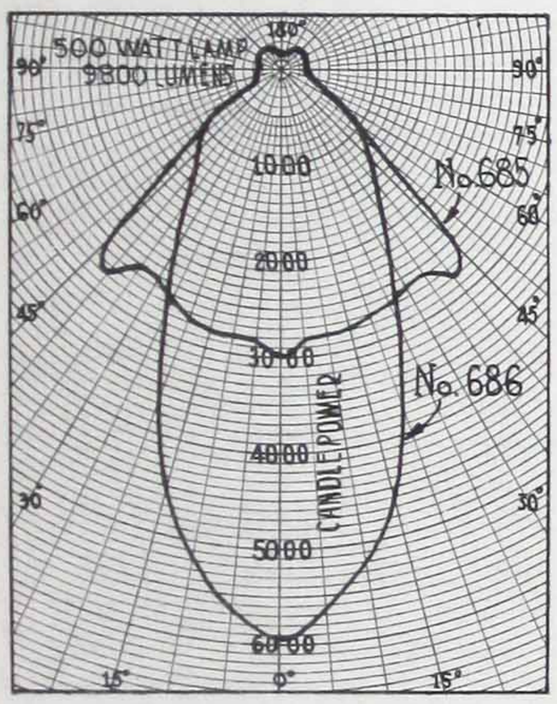
No matter what the product or the production method, no matter what the working conditions or the manufacturing problem, there is a Holophane Specific that may be applied to the particular problem at hand—and provide lighting that will satisfy every factory requirement as well as reduce illumination expense.

Obsolete reflectors that have depreciated to a point where they are of no practical value as reflectors are still in use in industrial plants; also a large class of misapplication of more modern reflectors whose distribution of light is not effective for the work performed. Many industrial locations require more light but, because of the rewiring expense, work is continued under the handicap of poor lighting.



Nos. 685-686

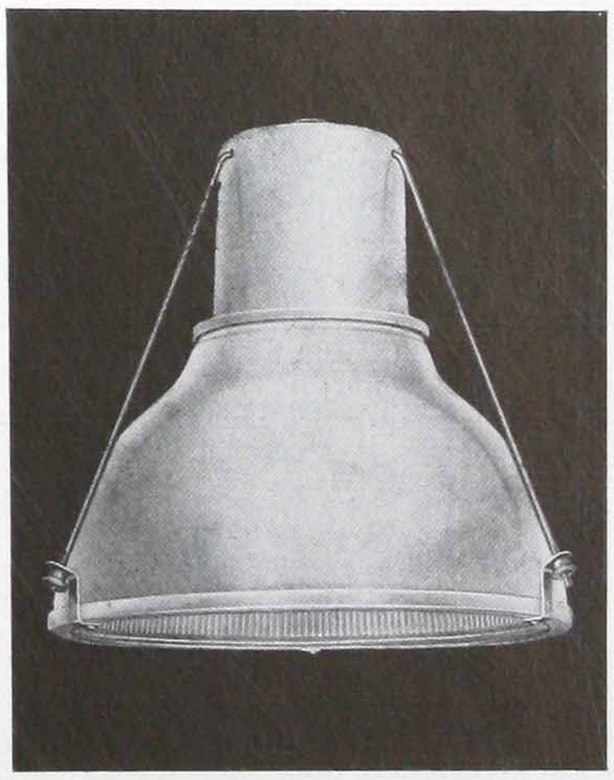
To correct this inefficiency and inadequacy without rewiring expense Holophane has designed a Standard Industrial Replacement Unit, for use on present outlets to increase illumination without increasing current consumption. This new unit is available in two types—No. 685 for intensive light distribution and No. 686 for concentrated localized lighting. It increases the illumination on the work from 30 to 100%, does not permanently depreciate in use and eliminates glare conditions that go hand in hand with obsolete equipment.



Characteristic Curves

The reflectors—No. 6585 (intensive distribution) and No. 6586 (focusing distribution)—are interchangeable in the No. 0685 fixture. No. 686 is especially suited for localized lighting for bench work or operations where machines are arranged in rows.

The deep prismatic glass bowl is held rigidly between a socket cover and a supporting ring by three rods with knurled nuts. By unscrewing the nuts and lowering the bottom ring the glass is easily removed either for cleaning, replacement, or for attaching the removable aluminum cover used when ceilings are dark or the unit in dirty locations. The unit has ½″ female pipe thread fitting. Mogul socket is standard. When specified for use with 200 watt lamp a mogul to medium adapter is furnished. Standard fixture finish cadmium plate.



Nos. 685-AL—686-AL

For best results with No. 685 the spacing should not exceed 1½ times the mounting height above the work. However, enameled metal reflectors can be replaced by this new unit regardless of the spacing with no sacrifice in uniformity and a 30% gain in illumination can be expected. No. 686 is installed according to local conditions as determined on the job.

SCHEDULE "I" DISCOUNTS

COMPLETE UNIT							FIXTURE ONLY						GLASS ONLY						
Catalog No.	List Price Each	Std. Pkg. Qty.	Std. Pkg. Wt., Lbs.	Mazda Lamp	Dimen., In. Dia.	Dimen., In. Dph.	Catalog No.	List Price Each	Std. Pkg. Qty.	Std. Pkg. Wt., Lbs.	Dimen., In. Dia.	Dimen., In. Dph.	Catalog No.	List Price Each	Std. Pkg. Qty.	Std. Pkg. Wt., Lbs.	Mazda Lamp	Dimen., In. Dia.	Dimen., In. Dph.
685*	$7.70	4	47	200**-300-500	14½	12⅜	0685	$3.85	4	15	5¾	5⅛	6585	$3.85	4	32	200**-300-500	14½	7¼
685-AL*	9.90	4	50	200**-300-500	14½	12⅜	0685	3.85	4	15	5¾	5⅛	6585-AL‡	6.05	4	35	200**-300-500	14½	7¼
686*	7.70	4	47	200**-300-500	14½	12⅜	0685	3.85	4	15	5¾	5⅛	6586	3.85	4	32	200**-300-500	14½	7¼
686-AL*	9.90	4	50	200**-300-500	14½	12⅜	0685	3.85	4	15	5¾	5⅛	6586-AL‡	6.05	4	35	200**-300-500	14½	7¼

**Use mogul to medium adapter with 200 watt lamp. ‡The aluminum cover is a separate part and can be furnished at $2.20 list each.
*These units packed in individual cartons. Three types of Pyrex roundels are available. Add to list price: Crystal $6.50; Blue $9.00; clear, etched or stippled.

These "LoBay" Specifics are designed for general lighting in factories and industrial plants where the mounting height is not sufficiently great to justify the use of high bay lighting equipment. They are particularly suitable where the electric outlets are grouped to conform to the machinery arrangement. (Localized General System of lighting.)

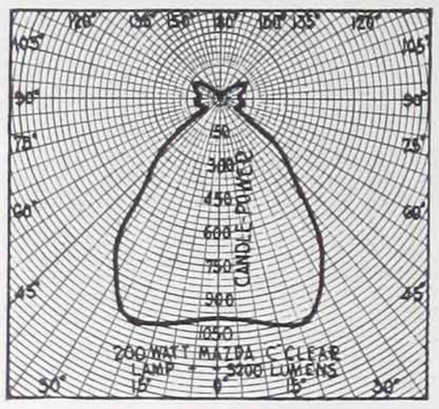
The advantages of these units over standardized metal industrial reflectors are: higher efficiency, light transmitted to ceiling creating a daylight appearance to lighted room, absence of glare due to 30 degree shielding of lamp filament, low dust and dirt depreciation and NO PERMANENT DEPRECIATION.

No. 653-654

No. 6533-6543-6583

No. 6531-6541

Intensive Distributions



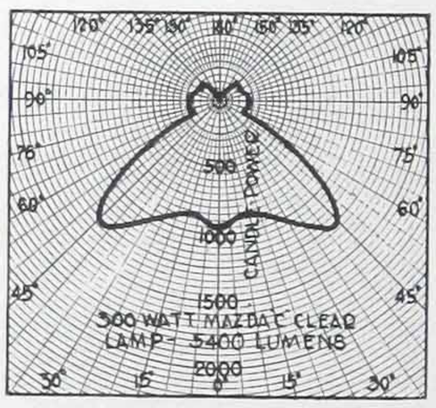
Characteristic Curve

These units are usually recommended on ordinary factory ceiling heights up to but not exceeding 20 feet. The Nos. 653 and 654 series are made of heavy pressed prismatic glass with reinforced flange at the bottom edge. They are equipped with metal extension necks in three different types of construction to suit as many different wiring conditions. Units No. 653 and 654 are designed for mounting on any standard 2¼-inch form "O" holder. Spacing should not exceed 1¼ times the mounting height above the work. Fixtures for Nos. 6531 and 6541 are designed for mounting on 4-inch outlet box. Fixtures for Nos. 6533, 6543 and 6583 are designed for use on ½-inch conduit or reinforced cord with ½-inch cord grips.

Nos. 6533, 6543, 6583 have porcelain sockets with threaded neck and lock nut so that the entire socket assembly can easily be taken out of the fixture for wiring. Metal parts, dull nickel finish.

Extensive Distributions

The H-CSE-100, CSE-100-BC, and 6484 series are extensive type industrial light directors designed to accommodate from 100 to 300 watt lamps and arranged for either pipe suspension or outlet box mounting. The exceptional wide spread allows spacing of from 1¼ to 2 times the mounting height above the work. The light directors are of heavy pressed prismatic glass terminating at the neck to engage set screw fitters. The fitters are of heavy spun copper having three beveled end set screws with lock nut assuring rigid support and guarding against backing out due to vibration. The 100 and 200 watt sizes have medium porcelain sockets and the 300 watt size mogul sockets. The fitters are finished dull nickel.



Characteristic Curve

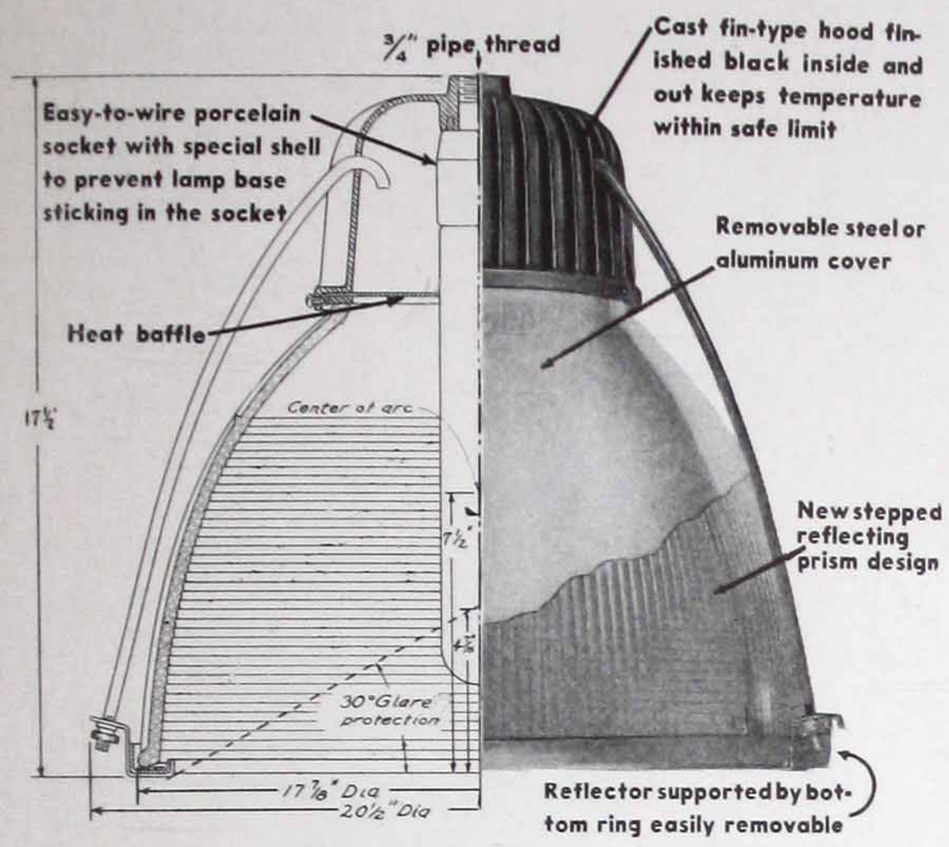
CSE-100-200-BC
6488-BC

H-CSE-100-200
6484

SCHEDULE "I" DISCOUNTS

COMPLETE UNIT							FIXTURE ONLY						GLASS ONLY					
Catalog No.	List Price Each	Std. Pkg. Qty.	Std. Pkg. Wt., Lbs.	Mazda Lamp	Dimen..In. Dia.	Dimen..In. Dph.	Catalog No.	List Price Each	Std. Pkg. Qty.	Std. Pkg. Wt., Lbs.	Dimen..In. Dia.	Dimen..In. Dph.	Catalog No.	List Price Each	Std. Pkg. Qty.	Std. Pkg. Wt., Lbs.	Mazda Lamp	Dimen., In Dia.	Dimen., In Dph.
653*	$2.10	8	31	100†-150	9	7⅛	0936	$0.65	8	8	3¾	2½	6573*	$1.45	8	23	100†-150	9	5⅛
654*	3.10	6	45	200	10⅜	8½	0936	.65	6	7	3¾	2½	6575*	2.45	6	30	200	10⅜	6¼
6531*	3.90	8	43	100†-150	9	9½	0641	2.45	8	20	4½	4½	6573*	1.45	8	23	100†-150	9	5⅛
6541*	4.90	6	45	200	10⅜	10⅝	0641	2.45	6	15	4½	4½	6575*	2.45	6	30	200	10⅜	6¼
6533*	3.30	8	43	100†-150	9	9¾	0643	1.85	8	20	3¾	4¾	6573*	1.45	8	23	100†-150	9	5⅛
6543*	4.30	6	45	200	10⅜	11	0643	1.85	6	15	3¾	4¾	6575*	2.45	6	30	200	10⅜	6¼
6583*	7.60	6	62	300	11⅜	12½	0644	3.35	6	15	3¾	6	6588*	4.25	6	47	300	11⅜	6¾
H-CSE-100*	3.50	8	33	100†-150	8⅛	9¼	0657	2.00	8	12	3⅜	3 13/16	CSE-100	1.50	8	21	100†-150	8⅛	6
H-CSE-200*	4.90	6	40	200	9¾	10⅝	0651	2.00	6	11	4½	3¾	CSE-200	2.90	6	30	200	9¾	7⅜
CSE-100-BC*	4.00	8	33	100†-150	8⅛	8¾	0654	2.50	8	12	4½	3¼	CSE-100	1.50	8	21	100†-150	8⅛	6
CSE-200-BC*	5.90	6	41	200	9¾	10½	0656	3.00	6	11	4½	3⅝	CSE-200	2.90	6	30	200	9¾	7⅜
6484	7.45	8	90	300	12	12⅜	0650	2.50	8	15	4½	4½	6488	4.95	8	75	300	12	8½
6488-BC	8.45	8	92	300	12	11⅝	0655	3.50	8	17	4½	3⅝	6488	4.95	8	75	300	12	8½

*Velvet finish glass is standard. †Use ⅞" socket extension with 100 watt lamp.
Aluminum covers for 6573—$1.50; 6575—$2.00; 6588 and 6488—$2.50 List.



No. 695—Cutaway view showing construction

At a single stride the new Prismatic Holophane "Lobay" Mercury Reflector No. 695 brings to industry a brilliant new gain in mercury lamp efficiency . . . a reflecting unit for low bay mounting which is designed and built exclusively for its job.

The High Intensity Mercury Vapor Lamp at low bay mounting height has a distinct **potential** efficiency.

Holophane Illumination Engineers have known that much of this potential efficiency will be squandered unless reflecting equipment is specially designed for this new lamp.

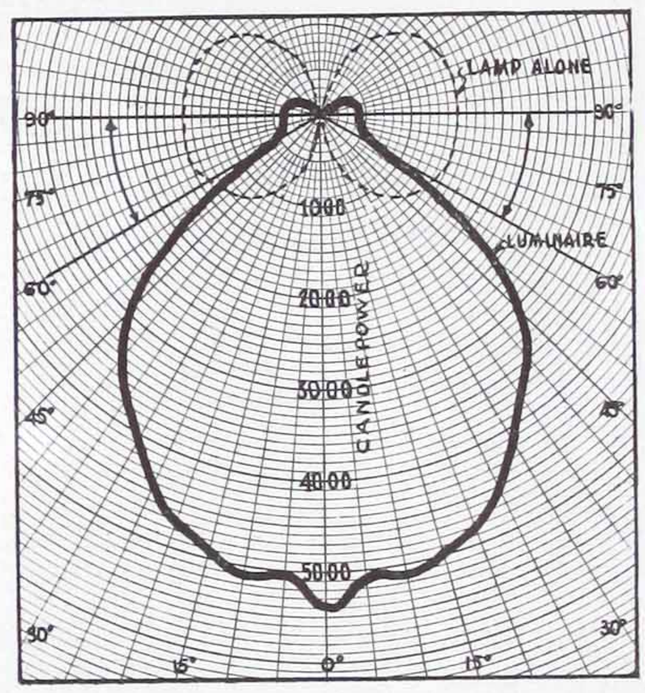
This new mercury light source with its high initial output—16,000 lumens—in an elongated bulb presents an interesting design problem for reflectors to be hung at relatively low heights. The reflector must have a high output efficiency. More important—this increased output must be directed to useful areas—high utilization efficiency. Glare must be avoided by restricting the light within the glare angle and by shielding the source itself from direct view within the line of normal vision.

Observe how faithfully Holophane has carried out these fundamental requirements of good engineering in presenting a unit which conserves in an unequalled manner the increased light from the Mercury lamp.

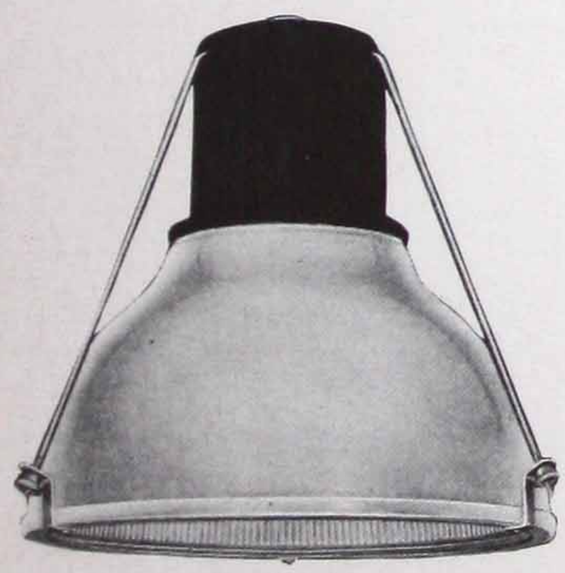
The deep prismatic glass reflector is held rigidly between a cast socket hood and a supporting ring by three rods with knurled nuts. Unscrewing the nuts lowers the bottom ring permitting easy removal of the glass for cleaning, replacement, or for attaching the aluminum cover used when ceilings are dark or the unit in dirty locations.

The cast fin-type hood painted black inside and out aids heat dissipation keeping the temperature well within a safe limit. An easy-to-wire porcelain socket is provided with a nickel plated screw shell to avoid the lamp base sticking in the socket. Unit has ¾" female pipe thread. Finish of metal parts, except hood, plated protective finish.

For uniform illumination, spacing should not exceed the mounting height above the working plane. For usual conditions of installation an intensity of 20 footcandles for one watt per square foot of floor area will be secured.



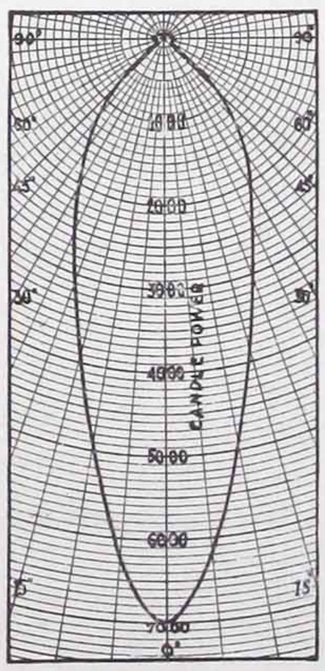
Characteristic Curve No. 695



No. 687-AL

No. 687 for use with 250 watt High Intensity Mercury Lamp is similar in construction to No. 695. Unit has ½" female pipe thread. The light distribution is of the intensive type so that the greatest portion of the available light will be confined to the work and the spilled (uncontrolled) light will illuminate the aisles and non-working areas. Glare has been economically eliminated by redirecting the light in the glare angle, and putting it to work by adding it to the working light in the 0°-60° zone.

No. 687 is ideally suited for lighting work benches, machine tools, textile operations (where color is not important) and many inspection operations in metal trades.

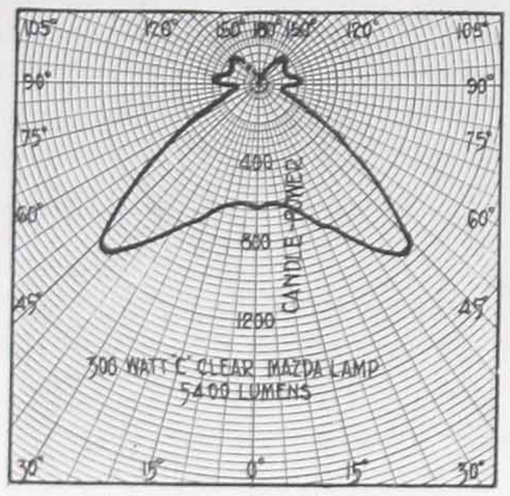


Characteristic Curve No. 687—250 watt Mercury Lamp

SCHEDULE "I" DISCOUNTS

Complete Unit	List Price Each	Std. Qty.	Ship Wt. Std. Qty.	Dimensions—Inches		Lamp
				Diameter	Depth	
695	$24.50	3	145	20½	17½	400 watt High Intensity Mercury Lamp
695-AL	27.50	3	150	20½	17½	
687	9.85	4	47	12½	12⅜	250 watt High Intensity Mercury Lamp
687-AL	12.05	4	50	12½	12⅜	

• LOW BAY ENCLOSED — INSPECTION SPECIFICS



Characteristic Curve No. 02490-S

In certain industrial locations there is a preference for a totally enclosed unit for general lighting. Holophane enclosed units permit greater diffusion and completely shield the lamp from view.

They are heavy two-piece prismatic units securely banded with an aluminum band to form a one-piece enclosing globe.

The bottom may be secured in blue color correcting glass where daylight quality is desired. See footnote.

Fitters for conduit mounting (No. 0362) and outlet box attachment (No. 0363-BC) are provided for No. 2470 while the larger sizes are arranged for ½″ conduit mounting.

The above units give symmetrical light patterns for general lighting. Maximum spacing twice the mounting height.

No. 02490-S—02180-A-S

Fitter No. 0362 for ½-inch conduit suspension

No. 2470

Fitter No. 0363-BC for direct attachment to 3¼-4-inch outlet bo

Inspection of materials is a very important and exacting industrial operation requiring a type of light not generally provided by ordinary units. Color correction, directional lighting, concentration or diffusion are called for in many types of inspection operations depending on the materials under observation.

No. 02490-JDW provides the necessary diffusion and color correction (has blue glass bottom for color correction and aluminum covered upper half to exclude yellow light) for inspection processes such as cigar grading, color presses in printing plants, textile processes, etc.

Nos. 946-947 provide the directional quality required in rayon hank inspection, silk examining, etc.

No. 1108-S or C was designed for inspection and grading of citrus fruits. It is suitable for most inspection uses and can, by an interchange of Controlenses, provide either an extensive elliptical light pattern or a concentrated symmetrical spot.

INSPECTION UNITS

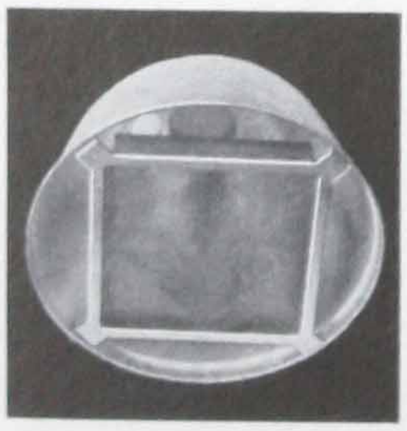
No. 02490-JDW

No. 947

No. 946

Nos. 946 and 947 are angle type concentrating industrial reflectors. They are similar to No. 944 (page 31) in reflector construction and light distribution. No. 946 is arranged for ½″ pipe mounting. No. 947 fastens directly on the ears of 4″ outlet box.

Some processes need a further refinement of light in the form of color correction. Daylight blue glass bottom lenses can be furnished for such requirements. Specify No. 946-Blue or No. 947-Blue when color correction is desired.



No. 1108-S or C

No. 1108-S—For uniformly lighting long inspection and grading tables or belts.

No. 1108-C—For inspection of small objects such as diamonds, where each inspector has a definite location and space occupied by the material is small.

The Units consist of a spun oxide aluminum reflector with a portion of the bottom covered with a specially designed flat blue prismatic Controlens. The Controlens for No. 1108-S provides an extensive elliptical light pattern. The Controlens for No. 1108-C gives a concentrated symmetrical spot. Units terminate with 2¼″ standard grooved heel.

Install No. 1108-S 2′ 6″ above inspection plane on 5′ centers; the first unit to be directly over table end. Mount No. 1108-C 2′ 6″ above inspection plane directly over area where material to be viewed.

SCHEDULE "I" DISCOUNTS

Complete Unit	Fixture Only	Glass Only	List Price Each	Std. Pkg. Qty.	Std. Pkg. Wt., Lbs.	Dimen., In. Dia.	Dimen., In. Dph.	Mazda Lamp
02470-S	....	.....	$7.25	8	70	9⅞	9⅞	100†-150
.....	0362	.....	2.00	8	20	4¼	2⅞	
.....	....	2470‡	5.25	8	50	9⅞	8	100†-150
02470-BC	....	.....	6.25	8	65	9⅞	9	100†-150
.....	0363-BC	.....	1.00	8	15	4¼	1⅛	
.....	....	2470‡	5.25	8	50	9⅞	8	100†-150
02180-A-S	....	.....	11.50	4	58	12	11⅜	200
.....	0370	.....	2.50	4	10	5⅜	2⅞	
.....	....	2180-A‡	9.00	4	48	12	9½	200
02490-S	....	.....	13.45	4	60	12¼	13⅜	300
.....	0369	.....	3.00	4	10	6⅞	3⅞	
.....	....	2490‡	10.45	4	50	12¼	10¼	300
02490-JDW*			18.60	4	60	12¾	13⅜	300
946§			6.45	8	40	10	13	200
947§			7.00	8	40	10	12⅛	200
1108-S or C			8.75	8	80	10¼	7	150
0571	Suspension hanger		4.10	12	22	Installation Methods for No. 1108-S or C		
0571-A	Husk for ⅜″ conduit		1.95	12	15			
0551	Bracket		2.60	8	15			
PS-119	2¼″ holder for socket		.25	50	..			

Aluminum covers spun on 02470-S, 02470-BC—$1.50; 02180-A-S and 02490-S—$2.50 list.
‡These units are packed in individual cartons. †Use ⅞″ socket extension.
*Note:—This unit consists of glass No. 2490 with an aluminum cover spun over the upper glass member and a blue glass lower member. No. 0369 holder supplied. §946-Blue—$7.00 list. 947-Blue—$7.55 list. Blue glass bottom: on 2470—$1.00 list extra; 2180-A—$1.40; 2490—$1.50.

Special manufacturing processes cannot be satisfactorily lighted by general lighting units. Complicated and irregular shaped machines require a lighting system capable of giving an irregular (asymmetric) light pattern. Holophane asymmetric industrial units direct the light so that the important location on the machines receive the greatest possible amount of light.

No. 02472-S or BC distributes the light extensively in the pattern of an elongated oval. It is excellent for corridor and aisle lighting permitting wide spacings and utilizing light otherwise wasted on side walls and unimportant areas. Maximum spacing, 2½ times the mounting height.

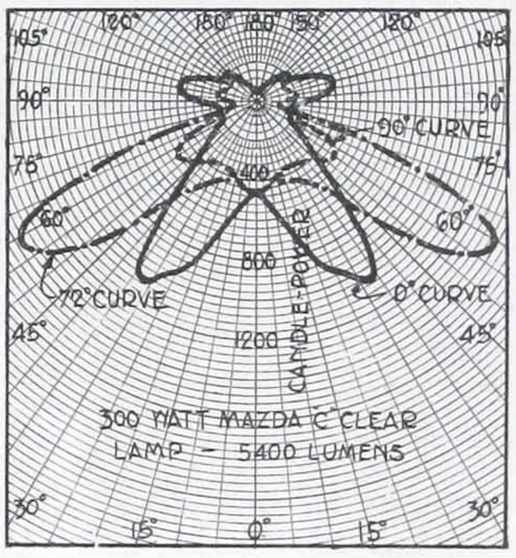
No. 02476-S or BC is designed to give uniform illumination on vertical surfaces. It is recommended for stock bins and for various textile operations requiring uniform vertical illumination.

Nos. 02472-S and 02476-S include ½″ conduit screw fitter (No. 0362-L. See page 16). Nos. 02472-BC and 02476-BC include 4″ outlet box fitter (No. 0363-BC. See page 16).

No. H-2076-S has been developed to increase vertical illumination. This increase is accomplished by an open bottom Reflector-Refractor unit which by virtue of the open bottom provides a greater intensity of light in the 0°-30° zone. The same glare control features are incorporated in this design as in the other Holophane units and the characteristic asymmetric light pattern is adhered to.

No. 02486-S is a special enclosing unit for the illumination of Leggers and Footers in Full Fashioned Hosiery Mills. By concentrating the available light on the important parts of the machine it is possible to greatly increase the illumination on the work and decrease the glare.

No. 02486-S

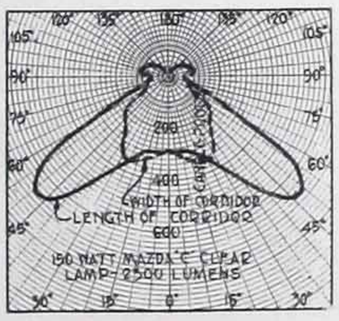


Characteristic Curves
No. 02486-S

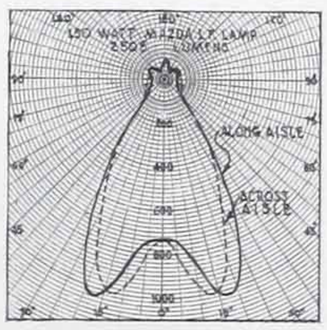
No. 02472-S

H-2076-S

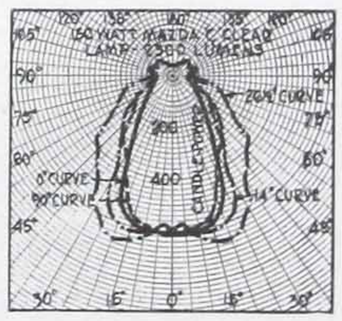
No. 02476-BC



Characteristic
Curves No. 2472



Characteristic Curves
No. H-2076-S



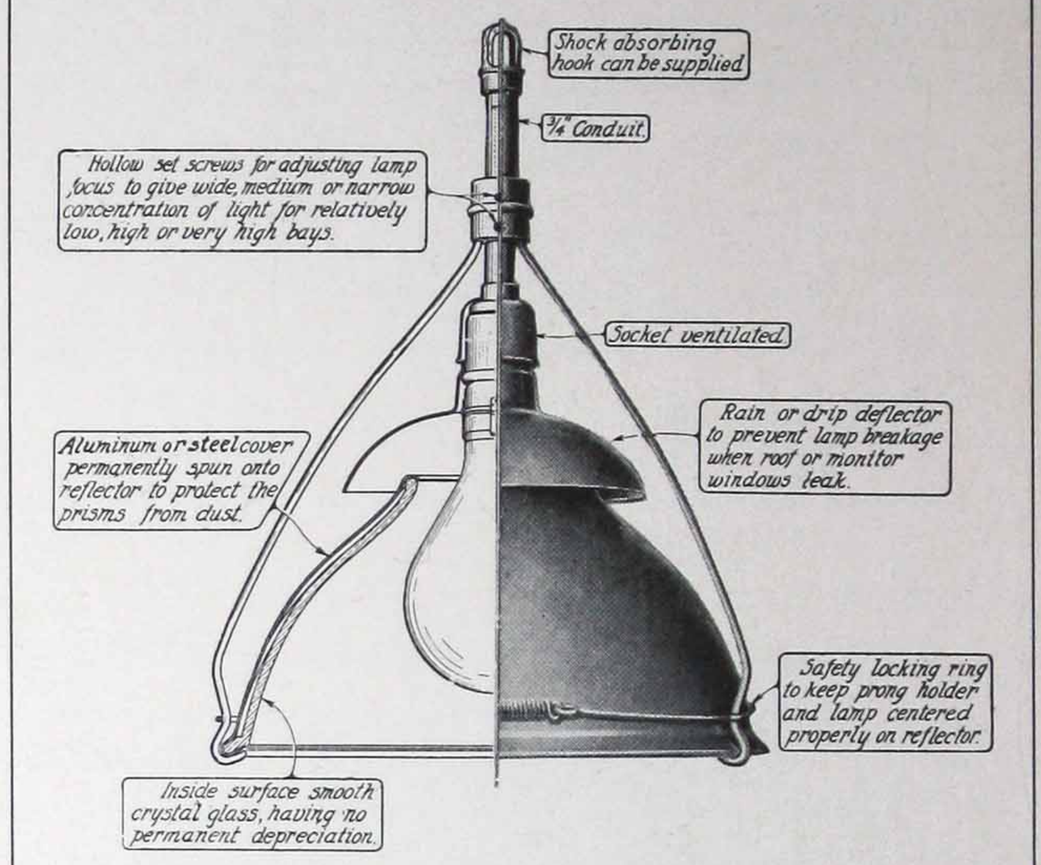
Characteristic
Curves No. 2476

SCHEDULE "I" DISCOUNTS

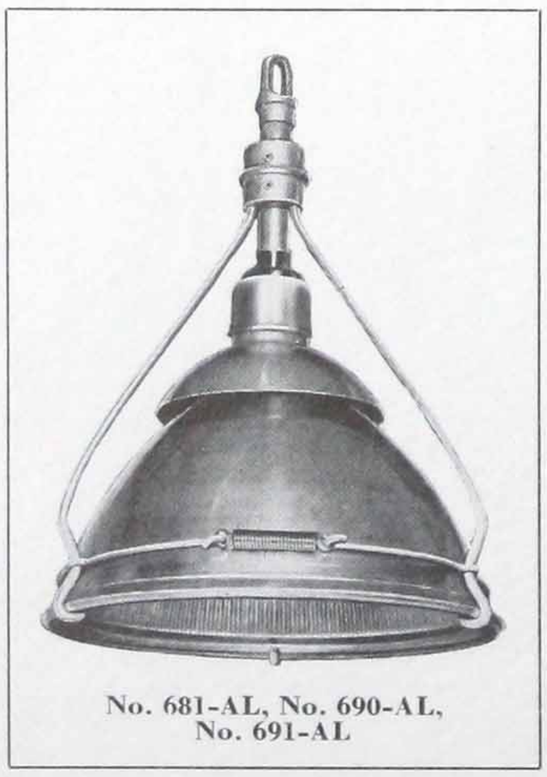
COMPLETE UNIT							FIXTURE ONLY						GLASS ONLY						
Catalog No.	List Price Each	Std. Pkg. Qty.	Std. Pkg. Wt., Lbs.	Mazda Lamp	Dimen., In. Dia.	Dimen., In. Dph.	Catalog No.	List Price Each	Std. Pkg. Qty.	Std. Pkg. Wt., Lbs.	Dimen., In. Dia.	Dimen., In. Dph.	Catalog No.	List Price Each	Std. Pkg. Qty.	Std. Pkg. Wt., Lbs.	Mazda Lamp	Dimen., In. Dia.	Dimen., In. Dph.
02472-S	$7.25	8	70	100†-150	9⅞	9⅝	0362-L	$2.00	8	20	4⅛	2⅞	2472‡	$5.25	8	50	100†-150	9⅞	7⅝
02472-BC	6.25	8	65	100†-150	9⅞	7⅞	0363-BC	1.00	8	15	4¼	1⅛	2472‡	5.25	8	50	100†-150	9⅞	7⅝
02476-S	6.65	8	70	100†-150	9⅞	9⅛	0362-L	2.00	8	20	4⅛	2⅞	2476‡	4.65	8	50	100†-150	9⅞	7⅛
02476-BC	5.65	8	65	100†-150	9⅞	7⅜	0363-BC	1.00	8	15	4¼	1⅛	2476‡	4.65	8	50	100†-150	9⅞	7⅛
H-2076-S	5.00	8	50	100†-150 I F.	8¾	10⅜	0660	2.00	8	12	3⅜	4¼	2076	3.00	8	38	100†-150 I.F.	8¾	6⅝
02486-S	13.45	4	60	300	12¼	12½	0369-L	3.00	4	10	6⅞	3⅞	2486‡	10.45	4	50	300	12¼	9¼

†Use ⅞″ socket extension. ‡These units packed in individual cartons.
Aluminum covers spun on at the following additional charge—2472, 2476, $1.50; 2486, $2.50 list.

Steel Mills, Power Plants, Foundries, and many other industrial plants require lighting equipment for mounting at great heights which will produce adequate light at floor level where the work is performed. Holophane equipment for such use is termed Hi-Bay specifics. Their rugged construction and efficient light controlling ability assure safety for the workmen both from a standpoint of mechanical security and of sufficient delivered illumination. The utilization of an efficient prismatic glass reflector as the light controlling medium renders the reflector impervious to heat, fumes, acids, gases, and moisture and permits the renewal of its initial light directing efficiency by a simple cleaning.



Inherently, the Holophane Hi-Bay specific is efficient since it is designed to redirect the light from the bare lamp into useful zones. Added to the advantage of salvaging normally wasted light from the bare lamp is the ability to shape the light pattern to fit the surfaces to be lighted and thereby add utilization efficiency to initial efficiency.



No. 681-AL, No. 690-AL, No. 691-AL

Holophane "Hi-Bay" Specifics are heavy duty industrial units designed to give maximum downward illumination. These units are specifically intended for locations where they must be mounted at considerable heights above the work. The reflectors are heavy pressed prismatic glass with dust-tight aluminum cover spun on permanently. The fixture stem is ¾-inch iron conduit terminating in a loop with wire port. The tripod holder is steel and grips the fixture stem at a point to give correct focal position for the lamp. The tripod is locked in position with a special retaining ring making it impossible for the reflector to fall. The sockets are heavy duty porcelain mill type with nickel plated socket shells. Fixture has plated protective finish. Units are NOT wired.

Safety . . . . . .

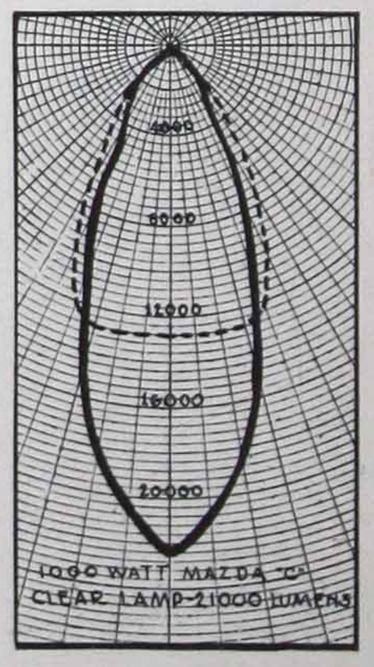
Permanence . .

Efficiency . . . .

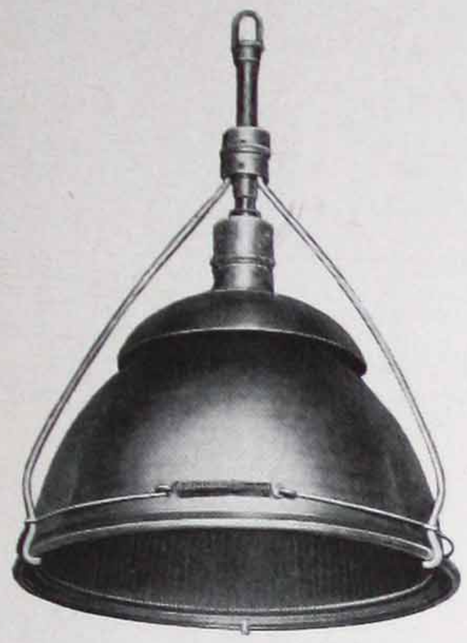
Use 681-AL, 691-AL in all High-Bay locations—that is where the mounting height above work equals the spacing distance.

Use 690-AL for High-Bay locations where the spacing is less than the mounting height.

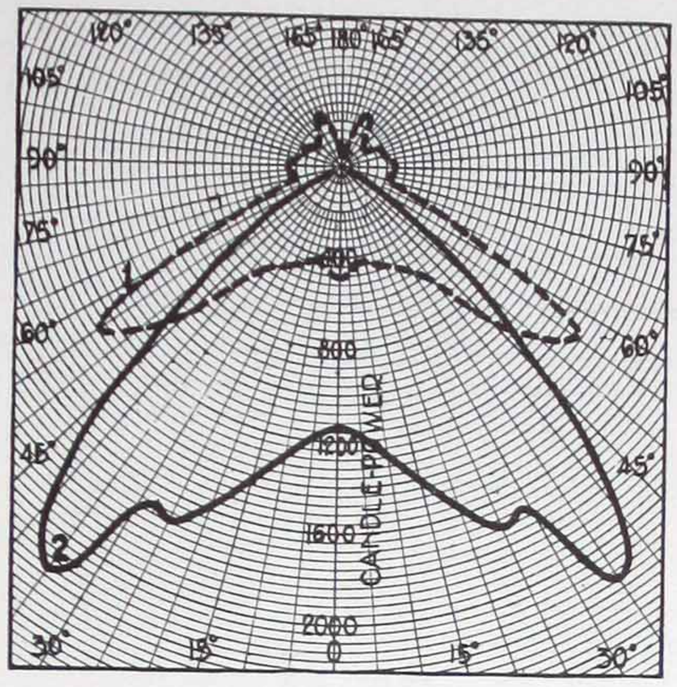
Use 681-AL-W and 691-AL-W for outdoor lighting.



Characteristic Curves
No. 691-AL Curve shows dotted
No. 690-AL Curve shows solid



No. 692-AL



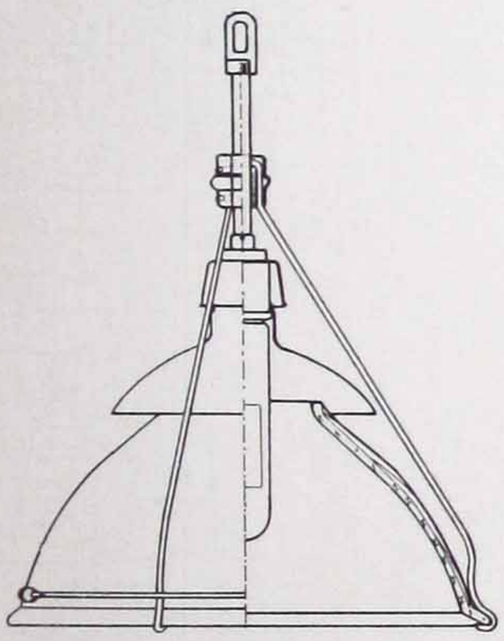
Characteristic Curves
1. No. 652 with 300 watt lamp.
2. No. 692-AL with 300 watt lamp.

No. 622-652

Holophane Specifics Nos. 622, 652, and 692-AL are heavy duty industrial units, designed to give maximum illumination on vertical surfaces (approximately twice the vertical illumination provided by competitive equipment). The reflectors are heavy pressed prismatic glass and are quickly removable without tools for cleaning. In extremely dirty locations Nos. 622 and 652 are obtainable with dust-tight aluminum covers spun on permanently. Dust-tight aluminum cover and drip-shield are standard with 692-AL. The fixture stem is ¾-inch iron conduit terminating in a loop with wire port. The tripod holder is steel and grips the fixture stem at a point to give correct focal position for the lamp. The tripod is locked in position with a special retaining ring making it impossible for the reflector to fall. The sockets are heavy duty porcelain mill type with nickel plated socket shells. Fixture has plated protective finish. Units are NOT wired.

Use Nos. 622 and 652 on low ceilings where outlets are spaced from 1½ to 2½ times the mounting height on installation where vertical illumination is required. No. 692-AL has been especially designed for high bays where spacing exceeds the mounting height.

The No. 671 reflector is similar in construction to the Hi-Bay and Vertical Surface Units. No. 671 is used in Textile Mills for the illumination of looms and Warpers.



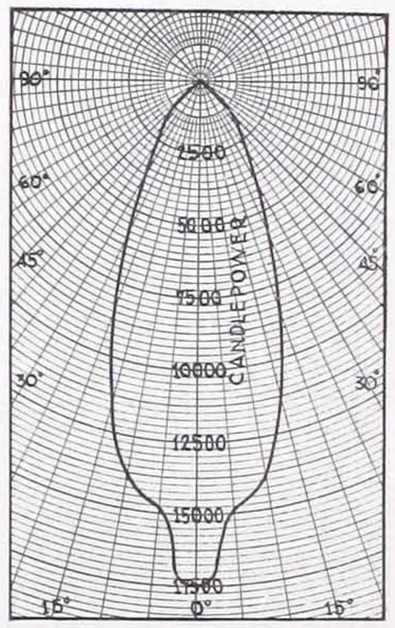
No. 693-AL

Holophane No. 693-AL is a high mounting unit for use with 400 watt High Intensity Mercury Vapor Lamp. The unit is made with a special rugged prismatic glass reflector, and with the same mechanical advantages of design and construction as the Hi-Bay units described above.

The open bottom reflector has been found to be more efficient, easier to clean and relamp and allows rapid cooling of the mercury lamp so that relighting time is a minimum.

Fixture has plated protective finish. A drip cover is mounted on the socket to prevent rain leaks through the roof or open monitors from breaking the lamp bulb.

Recommended spacing equal to the mounting height.



Characteristic Curve
No. 693-AL

SCHEDULE "I" DISCOUNTS

COMPLETE UNIT							FIXTURE ONLY						GLASS ONLY					
Catalog No.	List Price Each	Std. Pkg. Qty.	Std. Pkg. Wt., Lbs.	Mazda Lamp	Dimen., In. Dia.	Dimen., In. Dph.	Catalog No.	List Price Each	Std. Pkg. Qty.	Std. Pkg. Wt., Lbs.	Dimen., In. Dia.	Dimen., In. Dph.	Catalog No.	List Price Each	Std. Pkg. Qty.	Std. Pkg. Wt., Lbs.	Mazda Lamp	Dimen., In. Dia.	Dimen., In. Dph.
622‡**	$9.55	5	65	100-150-200	12¼	19⅞	0671	$3.50	5	25	12¼	19⅞	6522	$6.05	5	69	100-150-200	11⅜	6⅞
652‡**	11.50	5	90	200†-300-500	13¼	19½	0672-E	4.25	5	30	13¼	19½	6552	7.25	5	71	200†-300-500	12⅜	7⅜
692-AL§	30.25	3	140	500-1000-1500	19¾	26¼	0674-E	10.45	3	35	19¾	26¼	6692-AL§	19.80	3	105	500-1500	19⅛	10⅞
671**	9.55	5	80	100-150-200	13¼	20⅛	0672	3.50	5	33	13¼	20⅝	6671	6.05	5	75	100-150-200	12⅜	6¼
681-AL‡°	15.75	5	105	300-500	16	20⅝	0673	4.25	5	40	16	20⅝	6681-AL§	11.50	5	83	300-500	15⅛	7⅝
690-AL	30.25	3	150	750-1000-1500	21¾	25⅝	0675	10.45	3	40	21¾	25⅝	6690-AL§	19.80	3	110	750-1000-1500	21⅛	11⅜
691-AL‡	30.25	4	155	500*-750-1000-1500	19¾	26¼	0674	10.45	4	40	19¾	26¼	6691-AL§	19.80	4	115	500*-750-1000-1500	19⅛	9¾
693-AL	30.25	3	150	400 W. Hi. Inten. Merc. Vapor Lamp	21¾	26¼	0675	10.45	3	40	21¾	26¼	6690-AL§	19.80	3	110	400 W. Hi. Intensity Mer. Lamp	21⅛	11⅜
681-AL-W	29.50	5	400	300-500	20½	28⅛													
691-AL-W	44.00	5	500	500-750-1000	20¾	32													

§Complete with dust-tight aluminum cover spun permanently over reflector. For wire guards see prices on page 38. †Use mogul to medium base adapter.
°Can be furnished, clear glass minus aluminum cover at $11.50 list.
*If 500 watt lamps are to be used specify for 500 watt. These units will have an overall depth of 27″ when used with lamps larger than 500 watts. When set for 500 watt the depth is 24½″. ‡These units are packed in individual cartons.
**Aluminum covers on 622 or 6522; 652 or 6552; 671 or 6671—$2.50 list.

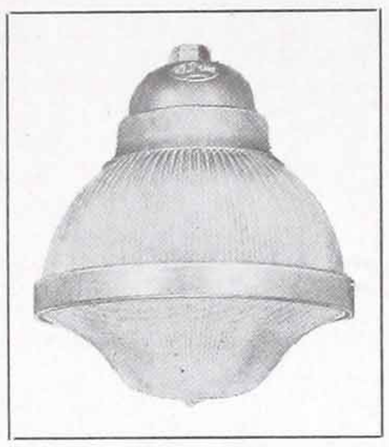
Conditions in Acid Plants, Artificial Leather Factories, Boatbuilding Plants, Breweries, Distilleries, Dye Manufacturing, Paint and Varnish Plants, Powder and other nitration plants, Oil Refineries, Rayon Plants, Textile Dyeing, Finishing and Bleaching, and large groups of similar industries necessitate the use of Vaporproof lighting.

These processes each have their own lighting problems which cannot be satisfactorily or efficiently solved with the ordinary Vaporproof unit which is essentially a bare lamp surrounded by a clear glass globe.

Cooperating with the various industries, Holophane has developed a series of Vaporproof Reflecting and Refracting Globes which not only meet the mechanical conditions but also the lighting requirements peculiar to the specific process.

These Holophane Vaporproof Reflecting and Refracting Globes conserve the light usually wasted in upward directions and redirect it to the work at wide or narrow angles as required and effectively eliminate the glare which is characteristic of the bare lamp.

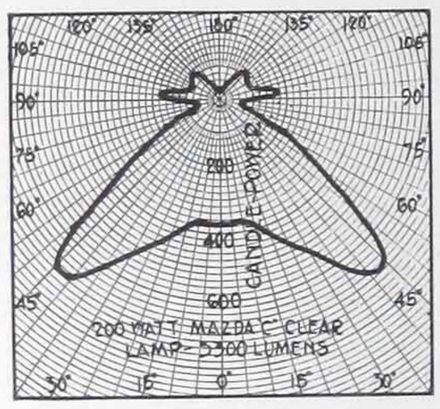
Holophane supplies fitters made of Silicon Aluminum Alloy with screw threads and gasketed seats machined for accurate fit. Other types of fitters for these Vaporproof Reflecting and Refracting Globes are manufactured by the Crouse Hinds Co. and others.



No. 02480

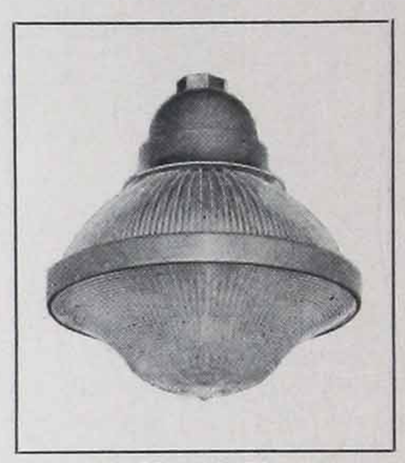
No. 02480—Symmetrical. For special process lighting or for use where general illumination is desired.

Uses 200 watt lamp. Wide extensive light distribution.

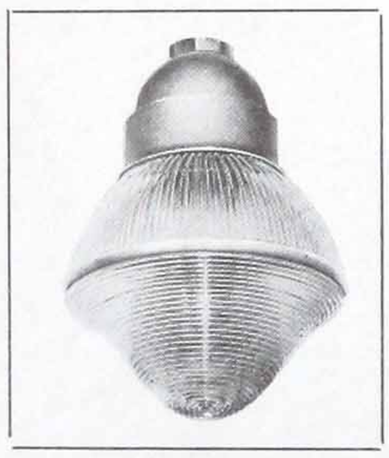


No. 02470—Symmetrical. Same light control characteristics as 02480 but smaller.

Uses 100-150 watt lamp.

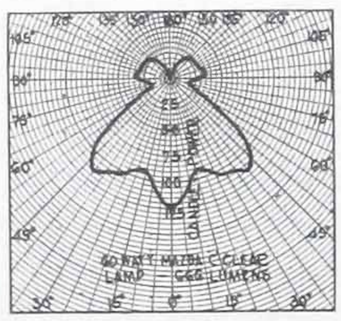


No. 02470



No. 02208

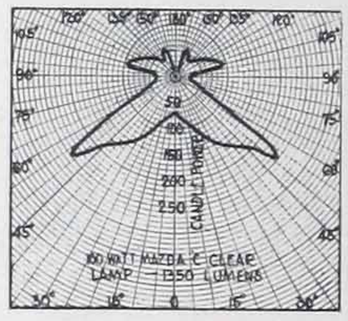
No. 02208—Very suitable for low intensity lighting or for local illumination.

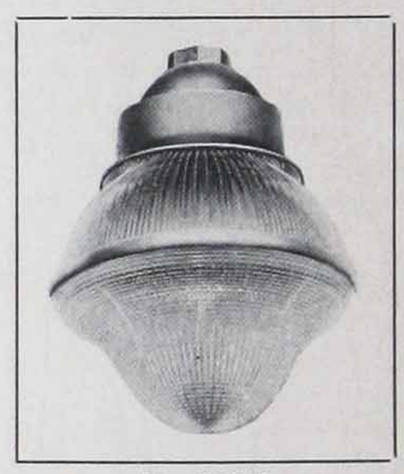


Uses 60 watt lamp. Wide light distribution

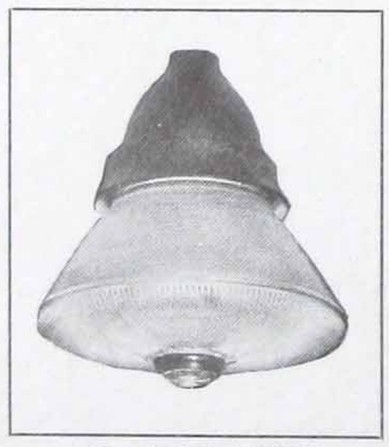
No. 02328—Provides wide light distribution like 02208 and is suitable for same use but where greater intensity is desired.

Uses 100-150 watt lamp.



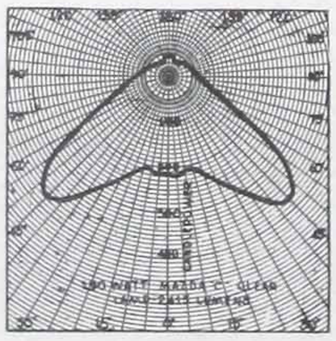


No. 02328



No. 02368-02378

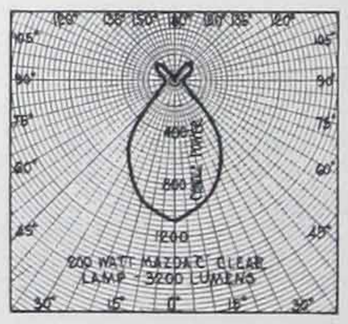
Nos. 02368 and 02378—Provide wide light distribution. Have same characteristics as 02328 but having a smooth outside surface they are especially suitable for very dirty locations.



No. 02368 uses 100-150 watt lamp; 02378-200 watts.

No. 02338—Narrow confined light distribution. Used for high intensity localized general lighting.

Uses 200 watt lamp.



No. 02338

SCHEDULE "I" DISCOUNTS

COMPLETE UNIT							FIXTURE ONLY						GLASS ONLY						
Catalog No.	List Price Each	Std. Pkg. Qty.	Std. Pkg. Wt., Lbs.	Mazda Lamp	Dimen., In. Dia.	Dimen., In. Dph.	Catalog No.	List Price Each	Std. Pkg. Qty.	Std. Pkg. Wt., Lbs.	Dimen., In. Dia.	Dimen., In. Dph.	Catalog No.	List Price Each	Std. Pkg. Qty.	Std. Pkg. Wt., Lbs.	Mazda Lamp	Dimen., In. Dia.	Dimen., In. Dph.
02208	$6.30	20	110	40†-50-60	6 3/8	8 3/4	0231	$3.50	20	35	3 7/8	3 1/4	2208	$2.80	20	75	40†-50-60	6 3/8	6 3/4
02328	8.15	8	63	75†-100†-150	8 5/16	10 3/4	0232	4.50	8	20	5 5/8	3 3/4	2328‡	3.65	8	43	75†-100†-150	8 5/16	8 3/4
02368	9.00	8	90	100†-150	10 1/2	11 1/2	0240	4.50	8	18	6 1/2	5 1/2	2368	4.50	8	72	100†-150	10 1/2	7 3/8
02470	9.25	8	68	100†-150	9 7/8	10 1/2	0234	4.00	8	18	5 1/4	3 5/8	2470	5.25	8	50	100†-150	9 7/8	8
02472	9.25	8	68	100†-150	9 7/8	10 1/2	0234-L	4.00	8	18	5 1/4	3 5/8	2472	5.25	8	50	100†-150	8 7/8	8
02476	8.65	8	68	100†-150	9 7/8	9 7/8	0234-L	4.00	8	18	5 1/4	3 5/8	2476	4.65	8	50	100†-150	9 7/8	7 1/8
02338	11.75	4	77	200	10 3/8	12 3/8	0233	4.50	4	25	5	5 1/4	2338‡	7.25	4	52	200	10 3/8	8 3/8
02378	11.00	4	62	200	12	12 7/8	0250	5.00	4	10	7 1/4	6	2378	6.00	4	52	200	12	8 1/4
02480	16.10	4	58	200	12 1/8	13 3/4	0238	4.00	4	14	7	3 1/2	2480‡	12.10	4	48	200	12 1/8	10 3/4

Aluminum covers spun on 02470, 02472, 02476, $1.50; 02328, $2.00; 02338, 02480, $2.50.
‡These units are packed in individual cartons. †Use 7/8" socket extension.

Nos. 043384, 043774
(Symmetrical) (Asymmetrical)

No. 0878
Bracket for mounting
Nos. 043384, 043774

The maximum light is delivered from such an angle that anyone working under the equipment at night will not be subjected to glare or eye-strain. An improved construction enables the refractor to be cooled by convection. 300-watt lamps can be used without resorting to outside ventilation and consequent dust depreciation.

These are scientifically designed specifics for lighting outdoor sub-stations. They consist of a Holophane double globe refractor, in inverted position over the lamp, enclosed in an outer protective globe to withstand weather conditions and mounted on a cast silicon aluminum fixture body, terminating at the base in a 1½-inch female pipe threaded connection. The fixture body holds a prismatic element designed to diffuse the downward light toward the ground so that the ground is well lighted without subtracting from the upward light. The refractors are supplied as listed below for symmetric and asymmetric distribution, depending upon the location, and in either type of distribution deliver the maximum beam of light at low angles above the horizontal. These units are usually mounted about 8 feet from the ground, where lamp renewals can be made quickly and without danger. The main light delivered is on the under side of the superstructure, the important surface to be well lighted.

SCHEDULE "R" DISCOUNTS

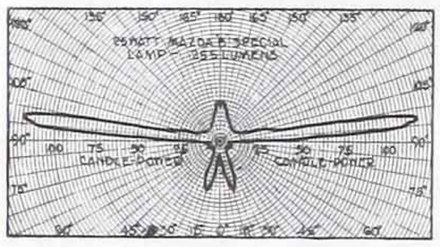
Complete Unit	Fixture Only	Ground Light Diffuser	Refractor Only	Outer Globe Only	List Price Each	Std. Qty.	Shipping Weight Std. Qty.	Dimen. in Inches Diam.	Dimen. in Inches Depth	Mazda Lamp
043384	....	....	....	....	$39.90	4	82	15	18½	200†–
	0873	....	....	....	20.00	4	10	15	8½	
		7184	....	....	4.00	4	*	11½	3¾	300–
			4338	....	8.00	4	36	8½	7⅞	
				1245‡	7.90	4	36	12¼	11¼	
043774	....	....	....	....	41.90	4	82	15	18½	200†–
	0873	....	....	....	20.00	4	10	15	8½	
		7184	....	....	4.00	4	*	11½	3¾	300–
			4377	....	10.00	4	36	8½	7⅞	
				1245‡	7.90	4	36	12¼	11¼	
0878 Bracket		....	....	....	8.00	4	15	24″ Span		

†With 200-watt lamp use Mogul to Medium Base Adapter. ‡Packed in individual cartons.
*Fixture and glass will be packed together in a carton.

No. 02223—02353

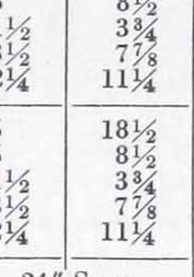
U. S. Dept. of Commerce Approved Aviation Globes

These airport boundary globes for multiple and series lamps and aviation obstruction globes for multiple lamps have been designed to meet the specifications of the U. S. Dept. of Commerce and are approved by them. The boundary globes are available in clear, green and red glass and the obstruction globes in red glass. The colors meet the specifications for aviation use.

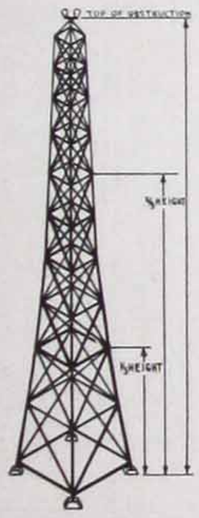


Characteristic Curve
No. 02223

Nos. X-2203-R-2
X-2323-R-2



Nos. X-2203-R
X-2323-R



Typical Obstruction

SPECIFICATIONS FOR OBSTRUCTION LIGHTING

RADIO TOWERS AND POLES, TRANSMISSION LINE TOWERS

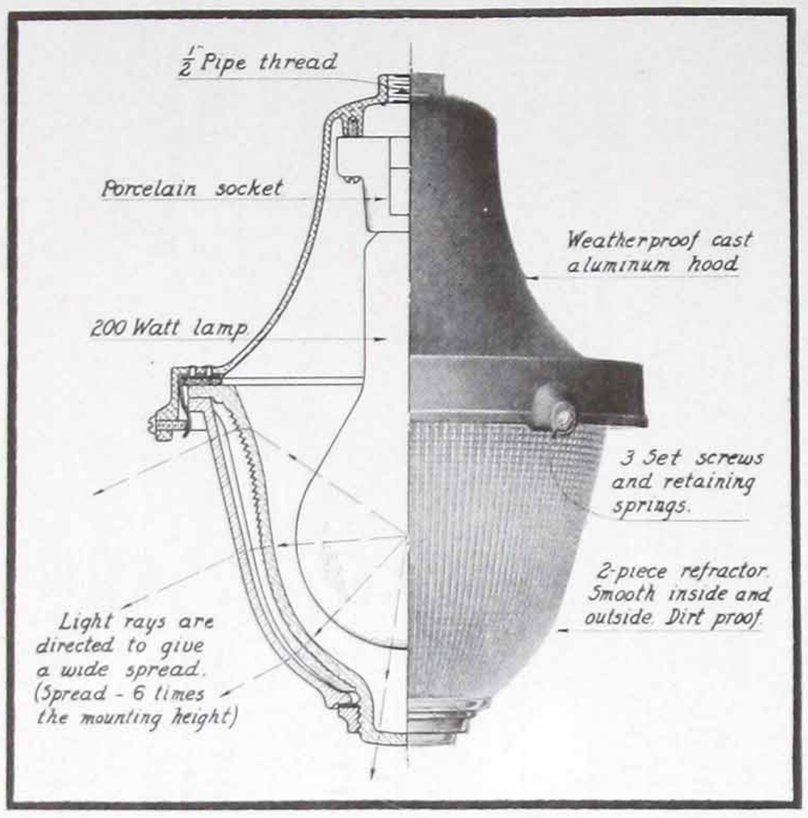
Height	Top Light Lamp	Top Light Globe	Top Light Fitting	⅓ and ⅔ Lights Lamp	⅓ and ⅔ Lights Globe	⅓ and ⅔ Lights Fitting
125′ or less	50 W.	2203-R	0223	50 W.	2203-R	0222
125-200′	100 W.	2323-R	0225	100 W.	2323-R	0224
200-300′	2-200 W.	300 m/m Airway		100 W.	2323-R	0224
Over 300′	2-500 W.	Beacon		100 W.	2323-R	0224
WATER TANKS, GRAIN ELEVATORS, GAS HOLDERS, ETC.						
200′ or less	100 W.	2323-R	0225	*50	2203-R	0222
Over 200′.	SPECIAL STUDY					

*At least one of the two lights at each level should be visible from any angle of approach.

SCHEDULE "I" DISCOUNTS

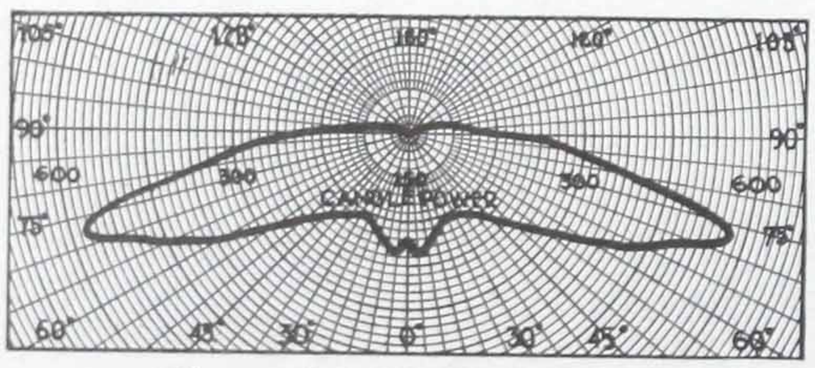
COMPLETE UNIT Catalog No.	List Price Each	Std. Pkg. Qty.	Std. Pkg. Wt., Lbs.	Mazda Lamp	Dimen. In. Lgth.	Dia.	Dph.	FIXTURE ONLY Catalog No.	List Price Each	Std. Pkg. Qty.	Std. Pkg. Wt., Lbs.	Dimen. In. Lgth.	Dia.	Dph.	GLASS ONLY Catalog No.	List Price Each	Std. Pkg. Qty.	Std. Pkg. Wt., Lbs.	Dimen., In. Dia.	Dph
X-2203-R-2	$19.50	4	63	2-50 W.	15¾	6¾	11¾	0223	$9.50	4	13	12⅝	3⅝	4⅞	2203-R	$5.00	8	50	6¾	7⅝
X-2323-R-2	23.45	4	100	2-100 W.	17⅞	8⅞	14	0225	10.25	4	15	13¼	4¼	5¼	2323-R	6.60	8	85	8⅞	9⅜
X-2203-R	8.50	8	58	50 W.	...	6¾	10	0222	3.50	8	8	...	3⅝	3⅛	2203-R	5.00	8	50	6¾	7⅝
X-2323-R	10.60	8	94	100 W.	...	8⅞	12¼	0224	4.00	8	9	...	4¼	3½	2323-R	6.60	8	85	8⅞	9⅜
02223-Crys.	8.75	8	71	60 W.	...	7½	10¾	0227	5.45	8	10	...	3⅝	2¾	2223-Crys.	3.30	8	61	7½	8⅞
02223-Ruby	10.95	8	71	Traffic Signal	...	7½	10¾	0227	5.45	8	10	...	3⅝	2¾	2223-Ruby	5.50	8	61	7½	8⅞
02223-Green	9.85	8	71		...	7½	10¾	0227	5.45	8	10	...	3⅝	2¾	2223-Green	4.40	8	61	7½	8⅞
02353-Crys.	15.85	8	76	600—1000 Lumen.	...	7½	14⅛	0229-S	12.55	8	15	...	4¼	6¾	2353-Crys.	3.30	8	61	7½	7⅞
02353-Ruby	18.05	8	76	100 W.	...	7½	14⅛	0229-S	12.55	8	15	...	4¼	6¾	2353-Ruby	5.50	8	61	7½	7⅞
02353-Green	16.95	8	76	Traffic Signal	...	7½	14⅛	0229-S	12.55	8	15	...	4¼	6¾	2353-Green	4.40	8	61	7½	7⅞

Construction and light control from Holophane "Wide-Spred" unit. Typical for 832



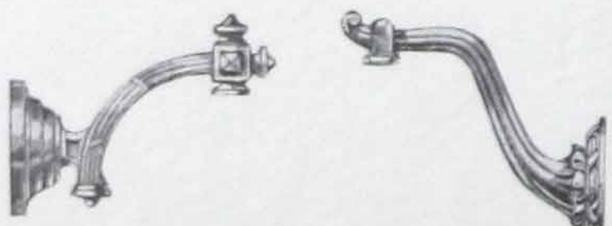
No. 830—No. 832

Nos. 833, 834, 835



Characteristic Distribution Curve

BRACKETS



No. 0865 No. 0866

No. 0875

It has been the practice in many industrial plants to light the exterior areas, such as the grounds and driveways, according to an amazing paradox.

First, the point has been recognized that much less light is needed outdoors than indoors. Indoors, work is done which requires clear visibility. But for exteriors, where artificial light is provided at all, it is chiefly in connection with watchman service or for safety and convenience in moving or driving about; these purposes do not call for anything near as much light as is needed indoors.

Second, recognizing the above, many plants have simply put the same kind of lights outdoors as indoors but spaced them farther apart. That is where the paradox comes in. For, while recognizing the difference in the lighting problem, the management has not recognized the self-evident need for different lighting equipment.

Inside the plant, the lighting reflectors, as a rule, give a light distribution something like the following:

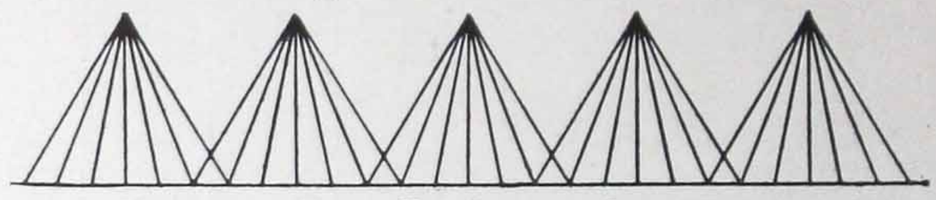


Fig. 1. Showing uniform illumination obtained from ordinary reflectors when spaced close together for interior illumination

Now take these lights outdoors and move them farther apart; you then get a result like this:

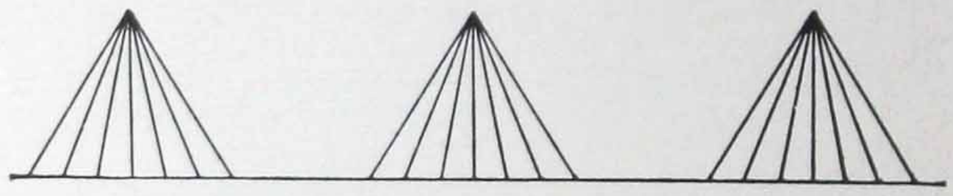


Fig. 2. Showing the alternate light and dark areas resulting from spacing ordinary reflectors too far apart

In other words, you get a succession of light and dark spots. This in itself defeats the purpose of the lighting. Uniformity is an essential in good illumination. Come out of the light into the semi-dark, and you see nothing. But gradually your eyes get used to the lesser light and then you recognize that it is not so much the lack of light that caused you difficulty in seeing as it is the difference in lighting intensity in one place and the other. Similarly, if you look at a bright object—and look at a less bright one—the latter is obscured until your eye becomes adjusted to the lower lighting level.

Obviously, the way to correct the above pictured unevenness in outdoor illumination is to distribute the light of each lamp evenly over a wider area—like this:

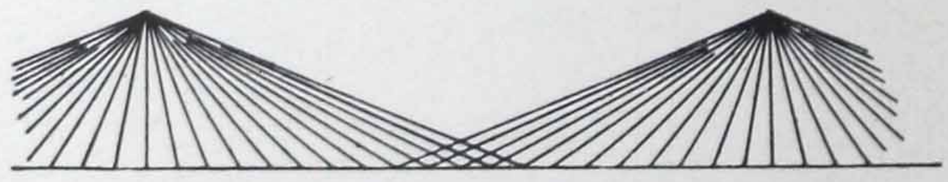


Fig. 3. Showing how Holophane "Wide-Spred" Units give uniform illumination when spaced far apart

The light distribution thus pictured requires no more lighting units—no more current—than that which is pictured in figure 2; but the result is vastly superior.

For this purpose Holophane has devised a Holophane Specific called the Holophane "Wide-Spred" Lighting Unit. Its action is explained by the upper left hand cut.

The unusual wide spread of light from these units has made them popular (not only for breweries and warehouses) but for the solution of outdoor lighting problems—especially gas station, road side stand, yard lighting, etc. Their design is such that the light is distributed over an area six times the mounting height.

The globes are heavy pressed double refractors sealed together weatherproof and dust-tight with smooth inner and outer surfaces to resist dirt accumulation.

Fixtures for these units are cast silicon aluminum with ½-inch tapped hole on 830 and 832 and with indication for drilling holes on the 833, 834, 835 for 3¼ or 4-inch outlet box mounting. Assembled in them is a medium porcelain receptacle.

No. 0875 is a ½-inch iron pipe bracket for Nos. 830 and 832. Nos. 0865 and 0866 are medium and heavy decorative brackets for 830 and 832 for flush wall or post mounting and are tapped ½-inch female pipe thread for attachment with a short nipple.

These "Wide-Spred" specifics are heavy duty, outdoor, cast silicon aluminum fixtures and Holophane double refractor globes in symmetric and asymmetric distributions. The fixture is dust tight and terminates in 1½-inch female pipe thread connection.

All exposed glass surfaces are smooth and dirt resisting. Socket can be adjusted for different angles of maximum candle power.

Nos. 04333-VF-A and 04338-A (symmetric light distribution) for general outside illumination where the light is desired equally in all directions.

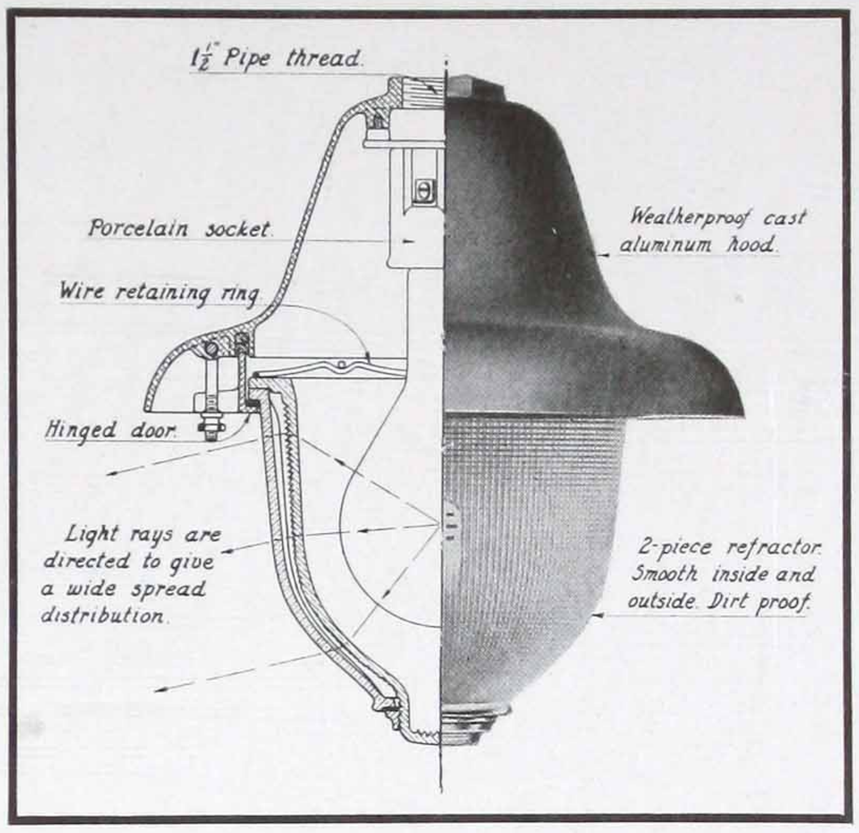
No. 04376-A (asymmetric light distribution) is useful where units are mounted between buildings and the light is desired in two directions only as in passageways and between buildings.

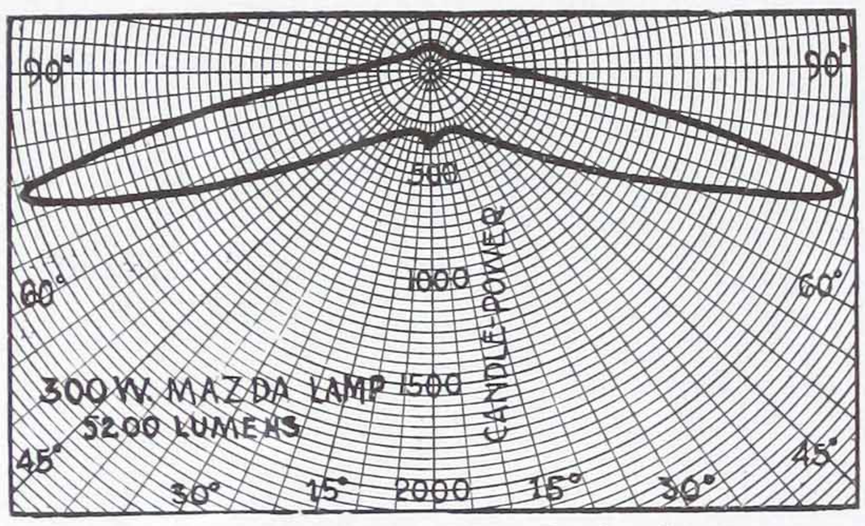
Nos. 04177-VF-A and 04377-A (fan shaped light distribution) for mounting on boundary of area to be lighted such as side of buildings, outdoor craneways, gas filling stations, parking spaces, etc.

No. 0878 bracket consists of a 4-inch diameter by 1¾-inch deep box and cast aluminum bracket 21 inches long with gasket between. The bracket terminates in a 1½-inch male pipe thread. The box is tapped for ¾-inch pipe. Four ⅜-inch bolts hold the box and bracket together and support it to the side of building or post. (These bolts are not furnished.)

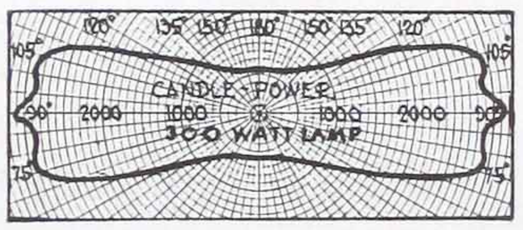
No. 0867 bracket is made of cast iron, finished black or aluminum if specified. The back plate is 10 inches in diameter and the span is 14 inches. The bracket terminates in a 1½-inch female pipe thread for connection to refractor by a short nipple.

Construction and light control from Holophane "Wide-Spred" Unit—No. 04338-A



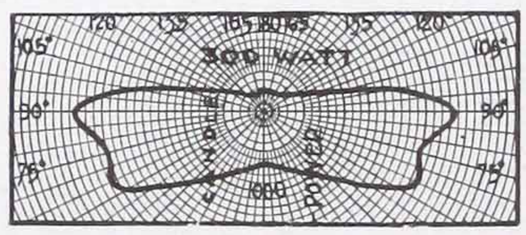


Characteristic Vertical Distribution Curve



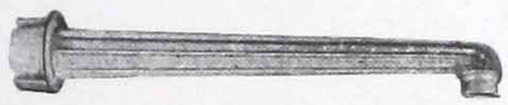
Left: Characteristic horizontal distribution curve of 04376-A two way asymmetric type

Right: Characteristic horizontal distribution curves of 04377-A and 04177-VF-A fan shaped asymmetric type

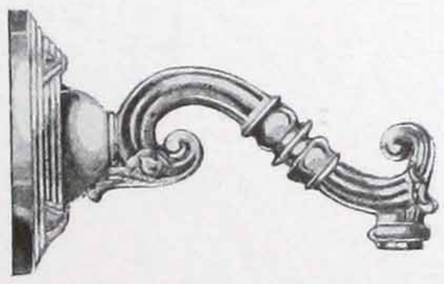


BRACKETS

Nos. 04333-VF-A, 04177-VF-A



No. 0878



No. 0867

SCHEDULE "R" DISCOUNTS

COMPLETE UNIT							FIXTURE ONLY						GLASS ONLY					
Catalog No.	List Price Each	Std. Pkg. Qty.	Std. Pkg. Wt., Lbs.	Mazda Lamp	Dimen., In. Dia.	Dimen., In. Dph.	Catalog No.	List Price Each	Std. Pkg. Qty.	Std. Pkg. Wt., Lbs.	Dimen., In. Dia.	Dimen., In. Dph.	Catalog No.	List Price Each	Std. Pkg. Qty.	Std. Pkg. Wt., Lbs.	Mazda Lamp	Dimen., In. Dia.	Dimen., In. Dph.
830‡	**$8.00**	8	49	100†-150	7½	9⅞	**0891**	**$4.50**	8	22	7½	5¾	**4337**	**$3.50**	8	27	100†-150	6½	5
832‡	**10.50**	8	58	200	8½	11⅜	**0890**	**5.50**	8	18	8½	6¼	**4334**	**5.00**	8	40	200	7½	6¼
833	**10.50**	8	62	200	8¾	9¼	**0897**	**5.50**	8	22	8¾	4	**4334**	**5.00**	8	40	200	7½	6¼
834	**7.00**	8	47	100	7¾	7	**0904**	**3.50**	8	20	7¾	2¾	**4337**	**3.50**	8	27	100	6½	5
835	**7.00**	8	50	150	7¾	7¾	**0905**	**3.50**	8	23	7¾	3¾	**4337**	**3.50**	8	27	150	6½	5
04177-VF-A§	**41.50**	4	133	500	16¼	17¼	**0882-A**	**25.00**	4	45	16¼	7	**4177-VF‡§**	**16.50**	4	88	500	11¾	11
04333-VF-A	**39.00**	4	165	500	16¼	16¼	**0882-A**	**25.00**	4	45	16¼	7	**4333-VF**	**14.00**	4	120	500	11¾	10
04338-A	**24.80**	4	68	200**-300	12⅞	14⅜	**0881-A**	**16.80**	4	33	12⅞	7¼	**4338**	**8.00**	4	35	200**-300	8½	7⅞
04376-A*	**25.80**	4	69	200**-300	12⅞	14⅜	**0881-A**	**16.80**	4	33	12⅞	7¼	**4376***	**9.00**	4	36	200**-300	8½	7⅞
04377-A§	**26.80**	4	69	200**-300	12⅞	14⅜	**0881-A**	**16.80**	4	33	12⅞	7¼	**4377§**	**10.00**	4	36	200**-300	8½	7⅞
Bracket	....	....	....	.....	.....	.....													
0875	**5.80**	8	35	.....	16″ Span														
0866	**5.75**	4	35	.....	12″ Span														
0865	**3.60**	4	13	.....	8″ Span														
0867	**13.35**	4	110	.....	14″ Span														
0878	**8.00**	4	15	.....	24″ Span														

*Two-way distribution. **Socket adapter required to change from mogul to medium base lamp.

NOTE: These items are sold for Industrial Lighting only. Write for information on Street Lighting applications.

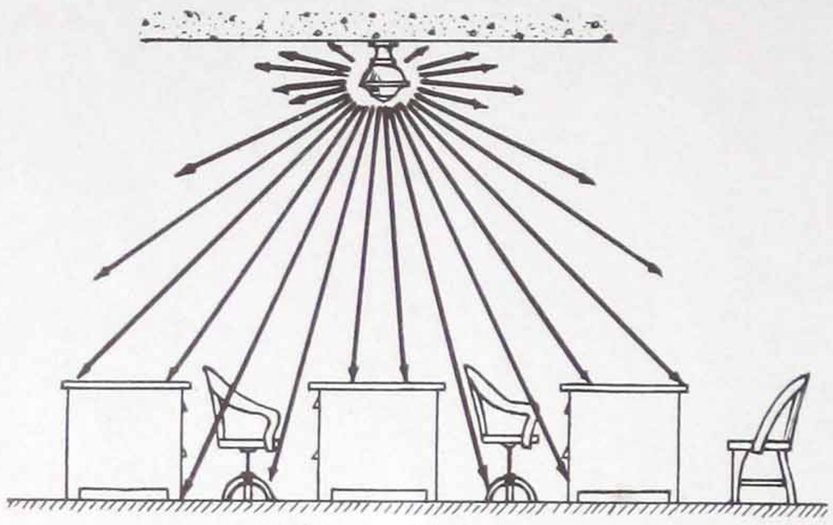
‡These units are packed in individual cartons. §Fan shaped distribution.

†Use ⅞″ socket extension with 100 watt lamp.

THERE are three broad classifications of general lighting equipment.

Direct Lighting:

Direct lighting units send most of the light rays directly from the source to the work thus:

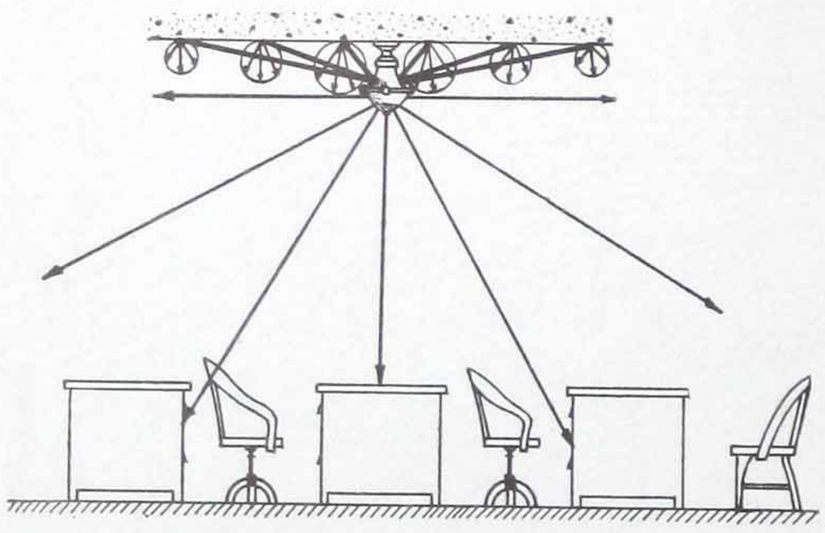


Direct Lighting

Holophane Reflector-Refractor
Direct Lighting Specific

Semi-Indirect Lighting:

Semi-indirect lighting units permit some of the rays to reach the work directly but the majority are first thrown upward and outward toward the ceiling which diffuses them and redirects them downward thus:

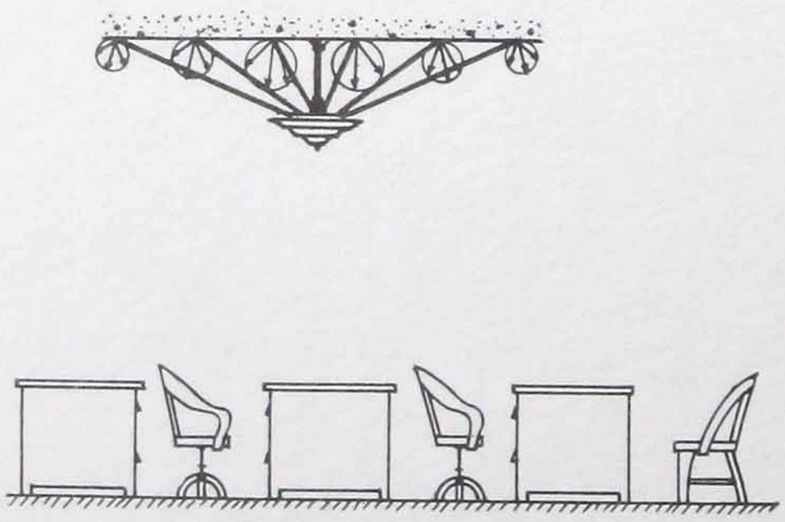


Semi-indirect Lighting

Holophane Filterlite
Semi-indirect Lighting Specific

Indirect Lighting:

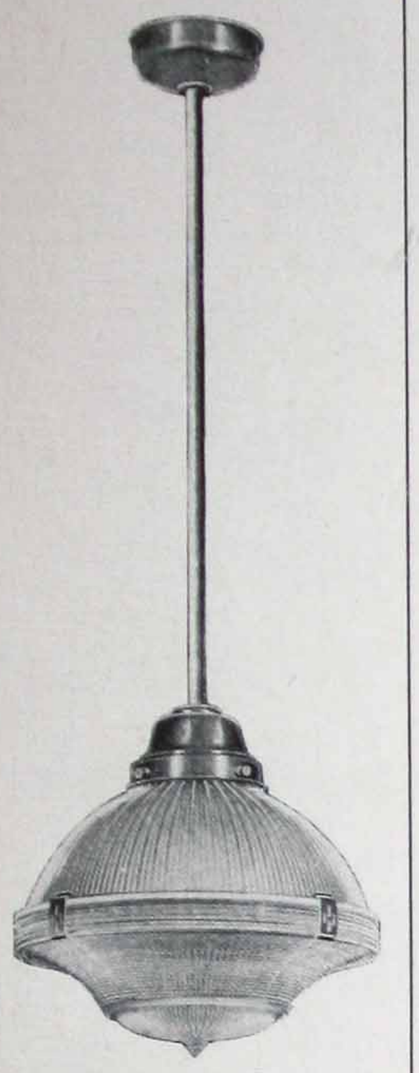
Indirect lighting units send all the light rays to the ceiling for diffusion and redirection toward the work thus:



Indirect Lighting

Holophane "Realite"
Indirect Lighting Specific

There is a proper place and application for each of these three forms of equipment. Holophane makes all three types as set forth in the following pages. Holophane Engineers will be glad to advise you which form is best for your use.

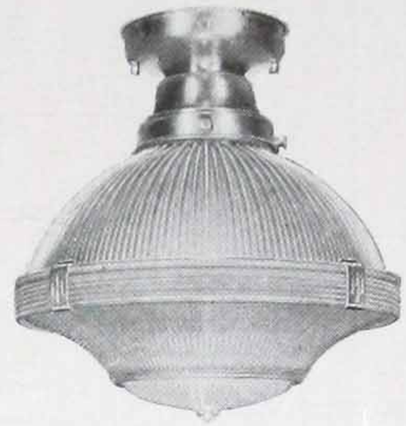


Suspension Type
(S-Type)

We list and recommend the use of Holophane glassware with Holophane hangers as complete units because that is the only method by which we can guarantee correct illumination. If Holophane glassware is used with fixture parts furnished by outside manufacturers, we cannot be responsible for the result.

Always use Holophane glass with Holophane fixtures to obtain genuine results.

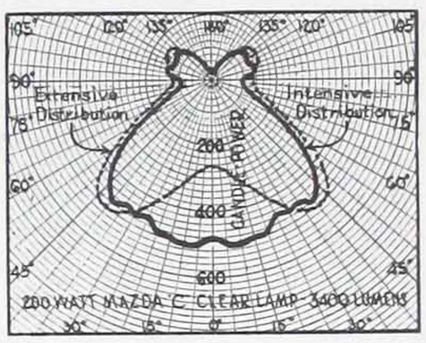
The Holophane Reflector-Refractor is the ideal direct lighting unit. Its efficient light controlling qualities assure the greatest possible amount of light delivered to the working areas, where it is needed. The sparkling prismatic crystal glass together with the satin nickel fixture design presents a harmonious combination for present day general lighting purposes. It is especially suitable for stores, public building spaces, school laboratories and general service areas or for offices and classrooms where ceiling conditions do not permit the use of semi-indirect luminaires.



Ceiling Type
(C-Type)

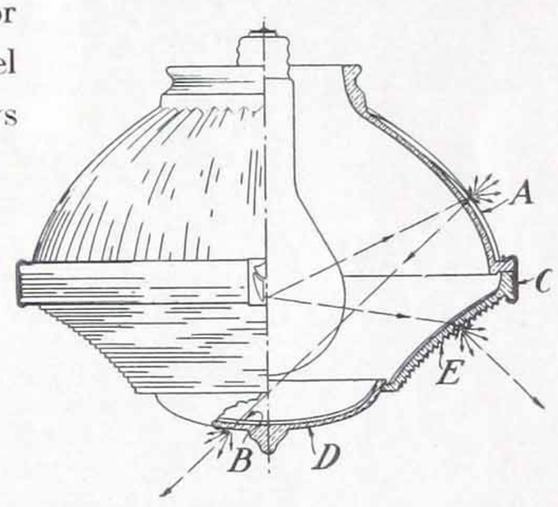
Reflector—Refractor Characteristics

1. Direct distribution (70% of output downward and 30% upward.)
2. Minimum flux at glare angles.
3. Maximum efficiency.
4. Minimum dust depreciation.
5. No permanent deterioration.
6. Extensive or Intensive distribution.
7. Attractive appearance.
8. Good diffusion.
9. Ease in re-lamping.



Characteristic Extensive
or Intensive Distribution

Fixtures are of heavy 22 gauge brass of smooth contour design. Ceiling type fixtures are provided with crossbar and barrel nuts for mounting. Suspension fixtures are of rigid stem, ball and swivel construction for direct attachment to outlet box by suitable hickeys and extensions furnished by the contractor.



A. Totally reflecting prisms turn light down and allow some to be transmitted.

B. Refracting prisms designed to produce Extensive or Intensive distribution.

A. B. E. Velvet finish assists diffusion.

C. Spring clips hold glass parts together.

D. Removable glass cup furnished on all sizes except Nos. 2170 and 2180 which have a solid bottom.

E. Refracting prisms designed to redirect the light.

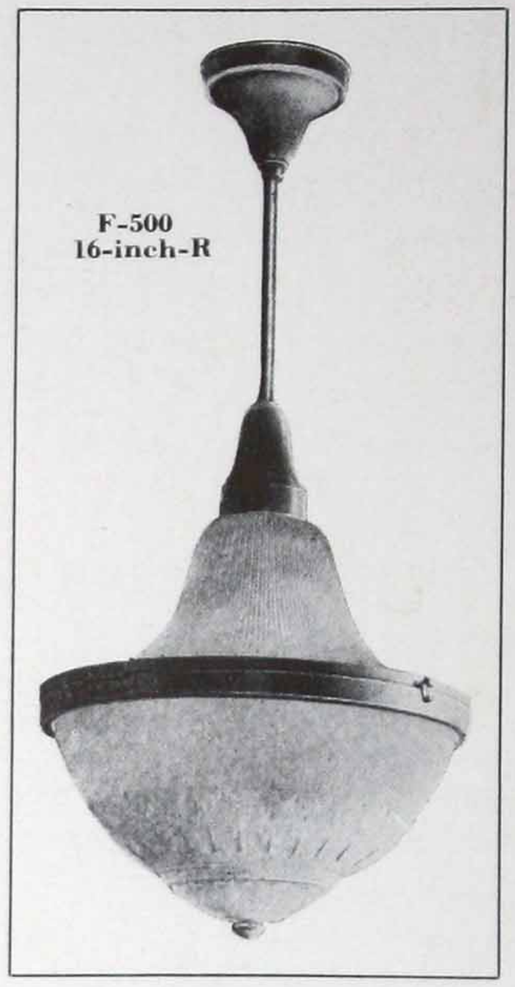
SCHEDULE "R" DISCOUNTS

COMPLETE UNIT								FIXTURE ONLY							GLASS ONLY						
Catalog No.	List Price Each	Std. Pkg. Qty.	Std. Pkg. Wt., Lbs.	Mazda Lamp	Dimen. In. Dia.	Dimen. In. Dph.	Holders	Cat. No.	List Price Each	Std. Pkg. Qty.	Std. Pkg. Wt., Lbs.	Dimen. In. Dia.	Dimen. In. Dph.	Holders	Catalog No.	List Price Each	Std. Pkg. Qty.	Std. Pkg. Wt., Lbs.	Dimen., In. Dia.	Dimen., In. Dph.	Holders
Ceiling Type Units—Type C (Re-lamped by Removing Bottom Cup)																					
C-2110-R*	$5.80	12	61	75-100	7½	8½	2¼-O	0591‡	$2.80	12	15	5¼	2¾	2¼-O	2110‡*	$3.00	12	46	7½	6⅛	2¼-O
C-2120-R*	7.50	8	66	100†-150	9¾	11⅛	3¼-O	0592‡	3.00	8	14	5¼	3⅞	3¼-O	2120‡*	4.50	8	52	9¾	7¾	3¼-O
C-2130-R*	14.00	4	54	200	12	12¾	4	0593‡	3.50	4	10	5¼	4	4	2130‡*	10.50	4	44	12	9½	4
C-2133-R**	14.00	4	54	200	12	12⅝	4	0593‡	3.50	4	10	5¼	4	4	2133‡**	10.50	4	44	12	9⅜	4
C-2140-R*	20.00	3	58	300-500	14	14¼	4	0594‡	5.00	3	10	5¼	4	4	2140‡*	15.00	3	48	14	11	4
C-2140-6″R*	20.00	3	59	300-500	14	14⅜	6	0595‡	5.00	3	11	6⅜	4¾	6	2140-6″‡*	15.00	3	48	14	10½	6
C-2143-R**	20.00	3	58	300-500	14	14⅛	4	0594‡	5.00	3	10	5¼	4	4	2143‡**	15.00	3	48	14	10⅞	4
C-2143-6R**	20.00	3	59	300-500	14	13⅝	6	0595‡	5.00	3	11	6⅜	4¾	6	2143-6″‡**	15.00	3	48	14	10⅜	6
Suspension Type Units—Type S (Re-lamped by Removing Bottom Cup)																					
S-2110-R‡*	7.80	12	68	75-100	7½	29¼	2¼-O	0571‡	4.80	12	22	4⅜	23⅝	2¼-O	2110‡*	3.00	12	46	7½	6⅛	2¼-O
S-2120-R*	9.50	8	71	100†-150	9¾	31½	3¼-O	0572‡	5.00	8	19	4⅜	24¼	3¼-O	2120‡*	4.50	8	52	9¾	7¾	3¼-O
S-2130-R*	16.00	4	60	200	12	33⅛	4	0573‡	5.50	4	12	4⅜	24¼	4	2130‡*	10.50	4	48	12	9½	4
S-2133-R**	16.00	4	60	200	12	33	4	0573‡	5.50	4	12	4⅜	24¼	4	2133‡**	10.50	4	48	12	9⅜	4
S-2140-R*	22.00	3	60	300-500	14	34⅝	4	0574‡	7.00	3	12	4⅜	24¼	4	2140‡*	15.00	3	48	14	11	4
S-2140-6″-R*	22.00	3	62	300-500	14	34⅛	6	0575‡	7.00	3	14	6⅜	24¾	6	2140-6″‡*	15.00	3	48	14	10½	6
S-2143-R**	22.00	3	60	300-500	14	34½	4	0574‡	7.00	3	12	4⅜	24¼	4	2143‡**	15.00	3	48	14	10⅞	4
S-2143-6″-R**	22.00	3	62	300-500	14	34	6	0575‡	7.00	3	14	6⅜	24¼	6	2143-6″‡**	15.00	3	48	14	10⅜	6
Re-lamped by Removing Globe (One-Piece Unit)																					
C-2170-R*	8.00	8	75	100†-150	9⅞	10⅞	4	0593‡	3.50	8	20	5¼	4	4	2170‡*	4.50	8	55	9⅞	7⅝	4
C-2180-R*	14.50	4	54	200	12	12¾	5	0598‡	4.00	4	10	5⅜	4	5	2180‡*	10.50	4	44	12	9½	5
S-2170-R*	10.00	8	73	100†-150	9⅞	31¼	4	0573‡	5.50	8	18	5⅜	24¼	4	2170‡*	4.50	8	55	9⅞	7⅝	4
S-2180-R*	16.50	4	58	200	12	33⅛	5	0578‡	6.00	4	14	5⅜	24¼	5	2180‡*	10.50	4	44	12	9½	5

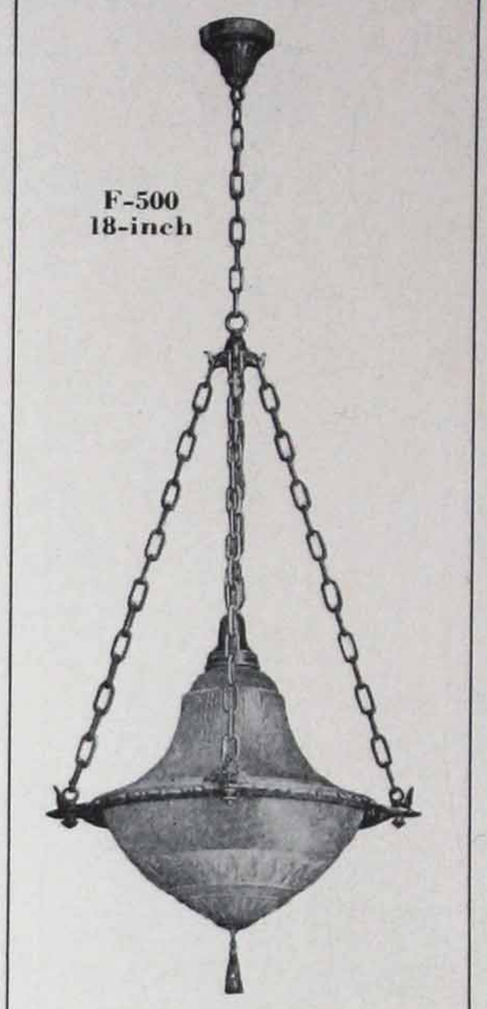
All fixtures are furnished with an easy to wire porcelain socket. No. 16 AF wire is furnished but fixtures are NOT wired.
Standard finish: Satin nickel. Dull brass, acid bronze and Duco finishes can be furnished at no extra cost. Other finishes quoted on request.
†Use ⅞″ socket extension with 100 watt lamp. ‡These units are packed in individual cartons. **Extra stem length $0.60 per foot list extra.**
*Distribution Extensive. **Distribution Intensive.

Ceiling Type
CF-100R, CF-200R,
CF-300R

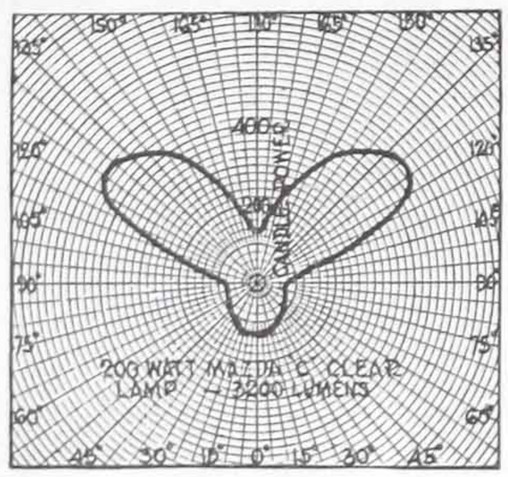
Suspension Type
F-100R, F-200R,
F-300R



F-500
16-inch-R



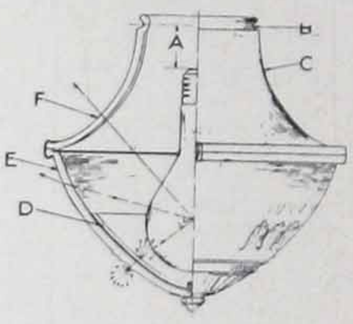
F-500
18-inch



Characteristic Curve

"Filterlite" Characteristics

1. Semi-indirect distribution (80% of output upward—20% downward).
2. High efficiency.
3. Low brilliancy.
4. Minimum dust depreciation.
5. No permanent deterioration.
6. Wide spread ceiling light.
7. No shadows or streaks.
8. No sharp cut-off on ceiling.
9. Excellent appearance.



A. Correct distance from center line of set screws to contact point of lamp—150 watt—2⅛″; 200 watt—3″; 300 watt—2″.

B. Close fixture joints resist dust collection on interior.

C. Steep slope resists dust accumulation outside.

D. Reflecting liner directs incident light upwards and provides enough transmission to illuminate lower bowl.

E. Refracting prisms bend light outward to give a wide spread on the ceiling.

F. Diffusing prisms spread the light uniformly on the ceiling and prevent both bright lines and fixture shadows.

Offices, classrooms and other locations where constant eye work is performed require a refinement of illumination not generally necessary in the lighting of less exacting business or industrial areas. The "Filterlite" is admirably suited for office or similar work because of the outstanding characteristics listed above.

Fixtures for glass Nos. 7322 and 7344 are of 22 gauge brass of smooth contour design. Ceiling type fixtures are equipped with cross bar and barrel nuts for mounting. Suspension fixtures are of rigid stem, ball and swivel construction with drop canopy and are arranged for direct attachment to outlet box by suitable hickeys and extensions furnished by the contractor. All fixtures have easy-to-wire porcelain sockets. No. 16 AF wire is furnished but fixtures are NOT wired.

Finish of above fixtures: Satin nickel. Dull brass, acid bronze and Duco furnished at no extra cost. Other finishes quoted on request.

Fixture for No. F-500-16″ and CF-500-16″ uses an internal four arm support attached to heavy spun hinged bands in which the glass rests. The glass and supporting fixture parts are attached to the hanger as a unit by means of a Diple connector. The fixture thus provides a means for quick relamping, easy maintenance and hinged support for the glass. Fixture for No. F-500-18″ is made of cast brass with a steel chain hanger. As listed it is furnished statuary bronze finish.

Installation—Use "Filterlites" spaced on not over 15 foot centers and mounted so that distance from ceiling to bottom of glassware will not exceed 25% of total ceiling height.

SCHEDULE "R" DISCOUNTS

COMPLETE UNIT							FIXTURE ONLY						GLASS ONLY						
Catalog No.	List Price Each	Std. Pkg. Qty.	Std. Pkg. Wt., Lbs.	Mazda Lamp	Dimen. In. Dia.	Dimen. In. Dph.	Catalog No.	List Price Each	Std. Pkg. Qty.	Std. Pkg. Wt., Lbs.	Dimen. In. Dia.	Dimen. In. Dph.	Catalog No.	List Price Each	Std. Pkg. Qty.	Std. Pkg. Wt., Lbs.	Mazda Lamp	Dimen., In. Dia.	Dimen., In. Dph.
Ceiling Type																			
CF-100R	$12.50	5	85	100†-150	12	14⅛	0500‡	$3.50	5	15	5¼	4⅜	7322‡	$9.00	5	70	100†-150	12	10½
CF-200R	18.00	4	95	200	14	17½	0501‡	5.00	4	15	6⅛	4⅝	7344‡	13.00	4	80	200	14	13⅝
CF-300R	19.00	3	72	300	14	17½	0502‡	6.00	3	12	6⅛	4⅝	7344‡	13.00	3	60	300	14	13⅝
CF-500-16″ R	42.00	2	110	500	16½	20¾	0405‡	22.00	2	20	8	5	7366‡	20.00	2	90	500	16	16¼
Suspension Type																			
F-100R	14.00	5	90	100†-150	12	32½	0480‡	5.00	5	20	4⅜	22¾	7322‡	9.00	5	70	100†-150	12	10½
F-200R	19.00	4	100	200	14	35¾	0481‡	6.00	4	20	5⅞	22¾	7344‡	13.00	4	80	200	14	13⅝
F-300R	20.00	3	75	300	14	35¾	0482‡	7.00	3	15	5⅞	22¾	7344‡	13.00	3	60	300	14	13⅝
F-500-16″ R	42.00	2	110	500	16½	48	0386‡	22.00	2	20	16½	32	7366‡	20.00	2	90	500	16	16¼
F-500-18″	60.00	1	119	500	21¾	75¼	0383‡	30.00	1	45	21¾	63	7388	30.00	1	74	500	18	23

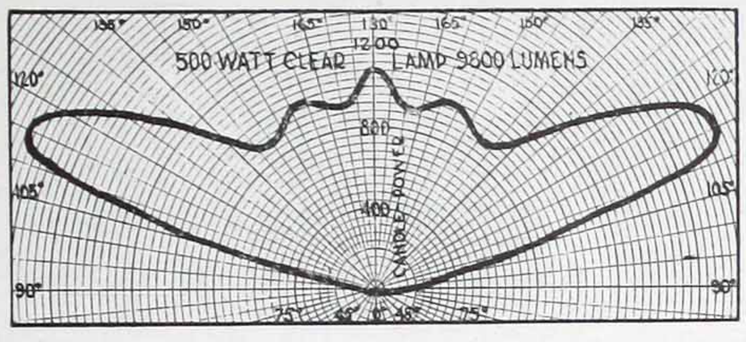
Holders for CF-100R, F-100R-4″ Special; Holders for CF-200R, CF-300R, F-200R, F-300R—5½″ Special; Holders for F-500-16″-R, F-500-18″—Special Band.
†Use ⅞″ socket extension with 100 watt lamp. ‡These units are packed in individual cartons.
On special orders, polished metal liners will be supplied instead of the standard white glass liners at an additional list of $0.75 for the 100-150 watt size, $1.00 on the 200-300 watt size and $1.25 on the 500 watt size. Pull chain canopy switch can be furnished at $1.50 list extra.
Extra stem length $0.60 per foot list extra on 100 to 300 watt sizes and $1.50 per foot list extra on 500 watt size.

The Holophane "Realite" (R-500 and R-1000) meets present day requirements for totally indirect lighting due to its modernistic design, efficient operating qualities and flexibility of fixture treatment. Its ability to direct the light outward and upward at wide angles to the ceiling results in indirect illumination of exceptional quality.

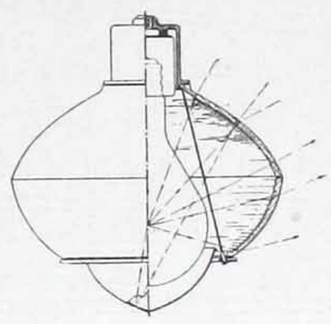
Controlled light distribution is produced entirely by a two-piece prismatic refractor, smooth on the outside and concealed by the aluminum mask. The unit is easily maintained and cleaned. It is available for use with mercury and mercury Mazda combinations (R-1000-V; R-1000VM).

Standard fixture finishes: dull aluminum or spray bronze. Furnished with drop canopy, swivel joint and stem suspension. Wire included but NOT attached to terminals. Easy re-lamping is accomplished thru the hinged lower step of the mask.

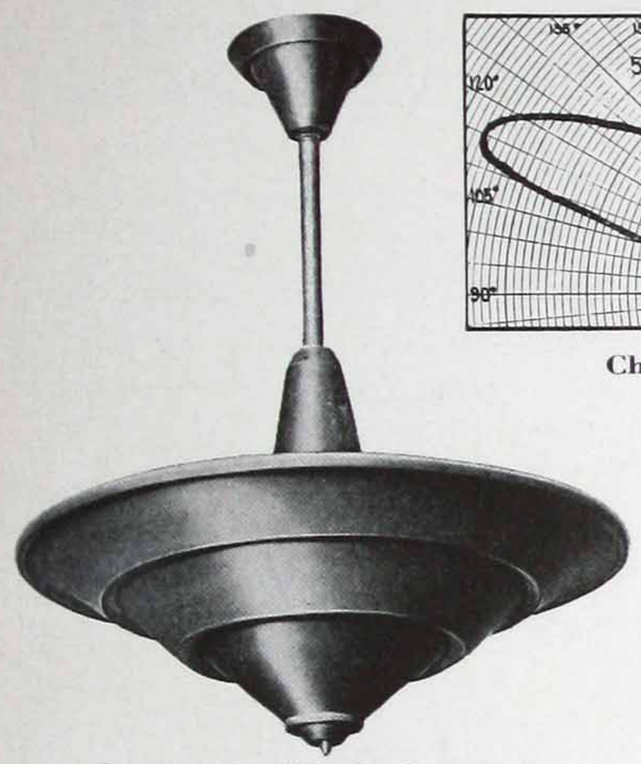
The optical assembly lends itself to fixture treatment by architects who desire distinctive (architectural) designs for special projects. The Holophane Engineering Department will gladly cooperate with such designers to insure preservation of the illuminating virtue of the optical assembly.



Characteristic "Realite" Curve



"Realite" Optical Assembly



The "Realite"

Nos. RP-500 and RP-1000 indicate the simple manner in which a translucent effect may be obtained with the Realite optical assembly as a core, and a translucent parchment mask above an inverted opaque cone. Architects and decorators may select the colors and decoration and make the masks locally.

Modified treatment in modernistic form is expressed in the RN-300 which is the optical assembly incorporated with a smooth contour fixture and polished metal bottom pan held by means of spring clips to the cast bottom flange. Finish of fixture and pan polished aluminum.

RP-500—RP-1000

No. 741

No. 485 is a modern open total indirect luminaire for 300-500 watt Mazda lamps. An efficient prismatic reflector having a permanent reflecting surface provides a wide distribution of light. The unit has a modern attractive contour with fixture parts finished dull aluminum. Good quality illumination results from this unit with even, unmarked ceiling coverage. The luminaire may also be used with 250 watt mercury lamp.

No. 741 is an open indirect lighting unit composed of a reflector bowl, tripod holder and suspension stem with canopy. The finish of the fixture is satin nickel, the reflector bowl being finished in a high grade porcelain enamel. Adjustment to suit any reasonable spacing without loss in uniformity of light may be had by the setting of the collar on the tripod holder.

It is recommended that wide spacings and large lamps be used for economy. Recommended especially for lighting drafting rooms and similar locations. Fixture is furnished NOT wired and without lamp. It is also available for use with 400 watt mercury lamp both alone and in combination with Mazda Lamps.

No. 485

Complete Unit	Optical Assembly	List Price Each	Discount Schedule	Standard Quantity	Shipping Weight Std. Qty.	Dimensions in Inches		Mazda Lamp
						Diameter	Depth	
R-500	.....	**$29.00**	R	4	92	24	30	300-500
	7180-A	**14.00**	R	4	80	11¼	12 5/16	300-500
R-1000	.....	**50.00**	R	4	200	34	42	1000
	7190-A	**20.00**	R	4	110	14¼	16¾	1000
RN-300	.....	**17.00**	R	4	94	13¾	30	200†-300
	7180-A	**14.00**	R	4	80	11¼	12 5/16	
RP-500‡		**29.00**	R	4	90	24	30	300-500
RP-1000‡		**50.00**	R	4	78	34	42	1000
485§	.....	**18.00**	I	4	50	19¼	36	300-500
741		**14.50**	I	6	120	20½	36	300-1500
			FOR USE WITH MERCURY LAMP					
R-1000-V		**$63.50**	R	1	50	34	42	400w-H.I.M.
R-1000-VM		**75.00**	R	1	65	34	42	Combination*
741-H		**16.00**	I	6	120	20½	36	400w-H.I.M.
741-HM		**29.50**	I	3	75	20½	36	Combination*
485-H§		**18.00**	I	4	50	19¼	36	250w-H.I.M.

*Combination of 400 watt Mercury and 4-200 watt Mazda lamps. †Use mogul to medium base adapter.
‡Complete optical assembly and fixture for use with parchment mask—RP-500—$24.50; RP-1000—$43.50 list each.
§Packed in individual cartons.

SE-900-910

The new "Gloria" unit meets every requirement for the lighting of department and other stores. It conforms to modern standards of style in store architecture and equipment. It directs the rays of light downward in a wide, uniform, spread of illumination over every display table, wall case and counter. With "Gloria" there are no glare spots nor dim areas to delay the customer's choice.

"Gloria" offers Holophane efficiency in a new attractive form by combining a white glass outer of modern attractive contour with an efficient Holophane reflector. The two in combination provide:

1. Distribution of light without fixture shadow or glare.
2. Concentration of light on merchandise without "spotlight" effect.
3. Sufficient diffused upward light to avoid appearance of darkened ceiling.
4. Broad even distribution of light over entire salesroom area.
5. True color, texture, appearance as under unobstructed light.

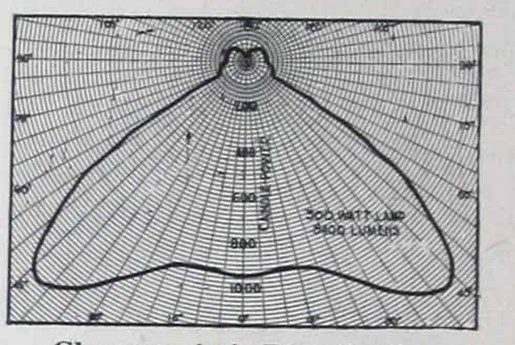
Fixtures are No. 22 gauge brass of smooth contour design. Ceiling type fixtures are provided with canopy crossbar and barrel nuts for mounting. Suspension fixtures are of rigid stem, ball and swivel construction with drop canopy and are arranged for direct attachment to outlet box, by suitable hickeys and extensions furnished by the contractor.

The prismatic reflector is supported on a tripod carried on the heel of the diffusing envelope. The reflector and diffusing envelope are removed as a unit for maintenance.

All fixtures are furnished with an easy-to-wire porcelain socket. No. 16 AF wire is furnished but fixtures are NOT wired.

Standard finish: Satin nickel. Dull Brass, acid bronze and Duco finishes can be furnished at no extra cost. Other finishes quoted on request.

CE-900-910

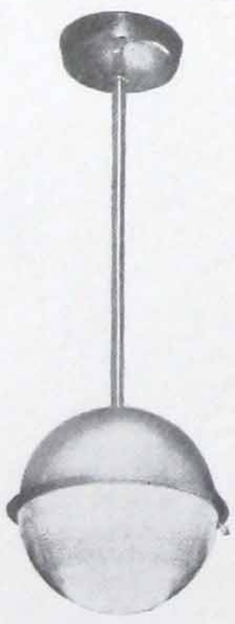


Characteristic Distribution
Maximum spacing is twice the mounting height over counters

SCHEDULE "R" DISCOUNTS

Complete Unit	Fixture Only	Glass Only	Distribution	List Price Complete	Std. Quant.	Ship. Weight Std. Qt.	Dimensions		Mazda Lamp	Holders
							Diameter	Depth		
CE-900	0608	E-900	Extensive	**$14.00**	4	92	11″	15½″	200	5″
SE-900	0584	E-900	Extensive	**16.00**	4	100	11″	36″	200	5″
CE-910	0609	E-910	Extensive	**20.00**	3	105	14⅜″	19¾″	300	6″
SE-910	0588	E-910	Extensive	**22.00**	3	120	14⅜″	36″	300	6″

Holophane "Storelight" No. ST-200, SL-200

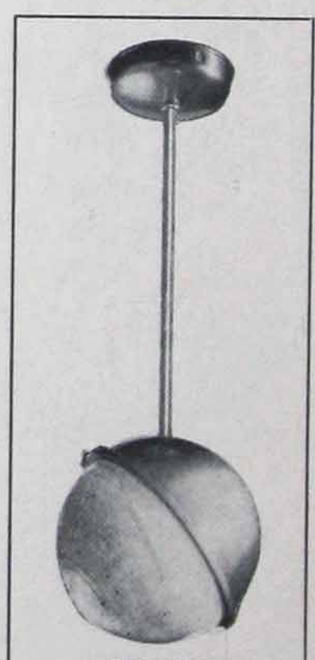


SL-200

Certain stores, notably grocery, liquor and drug stores, arrange their stock on shelves along the wall. Light is one of the best known media for attracting attention to such displays. Holophane No. ST-200 concentrates the light on the stock shelves and counters, delivering 100% more light than ordinary diffusing globes using equal wattage.

The Holophane "Storelight" is a simple sphere suspended on a ⅝-inch stem terminating in a slip ceiling canopy. A clear crystal prismatic hemisphere composes one-half of the sphere and is attached by a hinged ring to the upper opaque half. Internal construction includes an etched aluminum reflector and a medium base receptacle properly positioned for a 200 watt lamp. Re-lamping is affected by loosening a thumb screw and swinging the prismatic hemisphere on the hinge. It is furnished tilted for shelf and counter lighting and level for "straight down" counter lighting or for augmenting tilted units in very wide stores.

Install No. ST-200 directly over the customer's edge of counter and No. SL-200 directly over center of display counter. Maximum spacing not to exceed ten feet. Standard fixture length is correct for stores having a ceiling height under 12 feet. For higher ceilings specify extra length proportional to added height.



ST-200

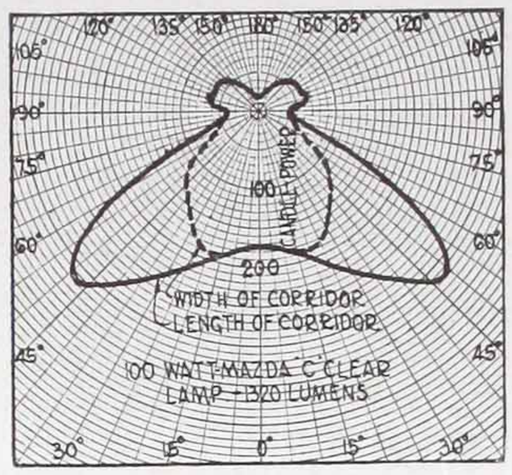
SCHEDULE "R" DISCOUNTS

Catalog No.	List Price Each	Standard Quantity	Shipping Weight Std. Quantity	Dimensions in Inches		Mazda Lamp
				Diameter	Depth	
ST-200	**$12.00**	4	40	10¼	30	150*-200
SL-200	12.00	4	40	10¼	30	150*-200

*Use ⅛″ socket extension with 150 watt lamp.

No. C-2172-R

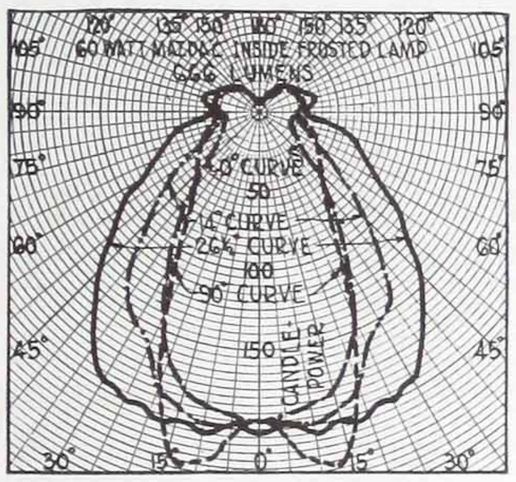
Irregular areas and locations requiring a high component of vertical lighting need what might be termed "tailor-made lighting." Holophane equipment meets these unusual lighting requirements readily due to its ability to control light and shape the light to fit the area to be lighted. For this reason the effective illumination from these units is far greater than can be obtained from any general lighting unit whose light distribution does not conform to the area.



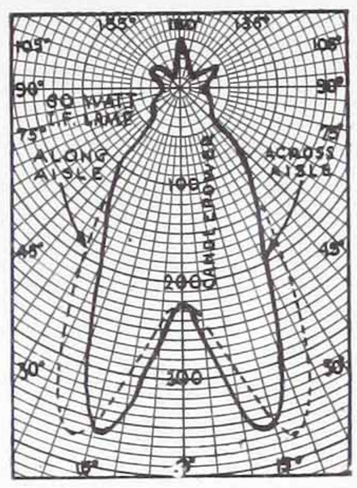
Characteristic Curves
No. C-2172-R

No. C-2172 is for corridor lighting or for long narrow areas of similar proportions (see No. 2472—page 17). The light is restricted in the width of the corridor and that which is generally wasted on side walls in ordinary lighting systems is redirected and utilized along the length of the corridor. Fixture finish—satin nickel.

No. 02176



No. 02176



No. 02076

No. 02076

Characteristic Curves

No. 02176 is for lighting library bookstacks, stock bins (see No. 2476—page 17), etc., and provides uniform illumination on books or shelves from top to bottom and from unit to unit. Designed for 50-60 watt lamp but can be furnished for use with 40 watt lamp on special order. Dull nickel finish fixture for mounting directly on ears of 3¼″-4″ outlet box.

Nos. 2172 and 2176 glass are provided with an orienting lug to engage a notch in the fitter to assure correct installation for proper light utilization. Proper instructions are included with the units for their installation.

No. 02076, also for bookstack lighting, is an open bottom unit with fitter for attachment to grooved porcelain socket. The open bottom feature permits increased illumination at lower points on the stacks. Installation should be made with orienting hole in fitter at right angles to the vertical surface to be lighted. This assures proper positioning of the glassware when orienting lug is engaged in hole. Fixture finish satin nickel. Use 60 watt Inside Frosted lamp.

SCHEDULE "R" DISCOUNTS

Complete Unit	Fixture Only	Glass Only	List Price Each	Std. Quant.	Ship. Weight Std. Qt.	Dimensions		Mazda Lamp
						Diameter	Depth	
C-2172-R	....	....	**$8.00**	8	75	9⅞″	10¾″	75*-100†-150
	0596‡	....	**3.50**	8	20	5¼″	4″	
		2172‡	**4.50**	8	55	9⅞″	7½″	75*-100†-150
02176	....	....	**5.50**	8	73	9⅞″	7″	50-60
	0366	....	**1.25**	8	18	4⅜″	1″	
		2176‡	**4.25**	8	55	9⅞″	6¾″	50-60
02076	....	....	**4.50**	8	45	8¾″	7″	60 I. F.
	0365	....	**1.00**	8	7	3⅝″	1″	
		2076	**3.50**	8	38	8¾″	6⅝″	60 I. F.

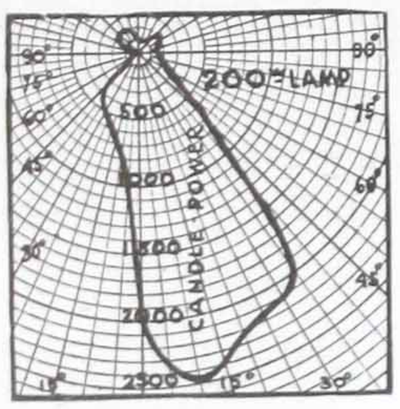
†Use ⅞″ socket extension with 100 watt lamp. ‡These units are packed in individual cartons.
*Use G. E. No. 49X416 socket extension with 75 watt lamp.

Holophane show window specifics meet every window lighting requirement. They are available for all types and sizes of windows, can be supplied for various methods of installation and at all times maintain their high quality of light direction. Discriminating merchants use, and the best dealers sell

Holophane Window Reflectors because

- **Efficient**
- **Effective**
- **Adaptable**

1. They deliver more light **on the display**—The prismatic construction actually controls the light.
2. They automatically light the transparent sign—No decrease in normal output.
3. Nothing to tarnish or peel off—Heavy pressed prismatic glass withstands usage.
4. No permanent depreciation—A cleaning restores the initial efficiency.
5. Lamp not seen from the street or the inside of the store—glare eliminated.
6. Does not change color of light—Shows articles in their "true color."
7. Color effect can be obtained by colored lamps or color filters.
8. Heavy pressed glass reduces breakage to a minimum—No frequent replacement.
9. They **Cost** Less—but give **more** light.
10. Individual carton packed.



Characteristic Curve

The No. 916 is more efficient than any window reflector on the market due to a combination of new reflecting and refracting prism designs. It is most flexible in application—can be used exposed or flushed into any type of ceiling construction. The bottom flange is horizontal so that no complicated ceiling construction is necessary for flushing-in. The required opening is circular which facilitates installation as compared with odd-shaped openings needed for other reflectors.

No. 916

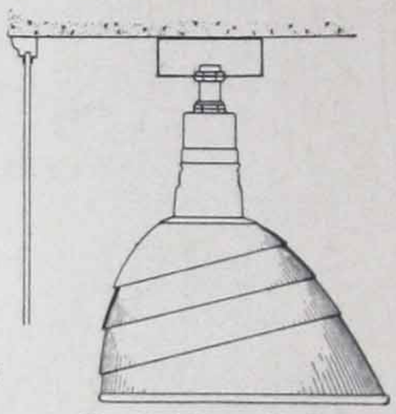
No. 916—For porcelain socket—includes No. 0936 spun grooved neck extension and 2¼″ Form "O" holder.

No. 913—For ½″ pipe—includes No. 0643 holder tapped ½″ female pipe thread.

No. 914—For outlet box—includes No. 0641 holder drilled for 4″ outlet box ears.

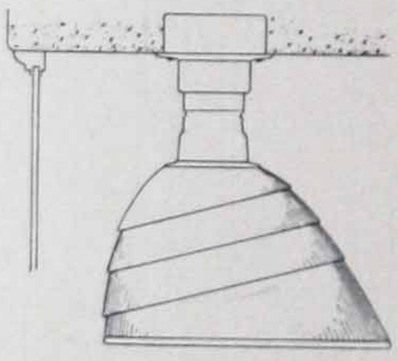
Minimum spacing for exposed mounting 12″ on centers.

No. 913

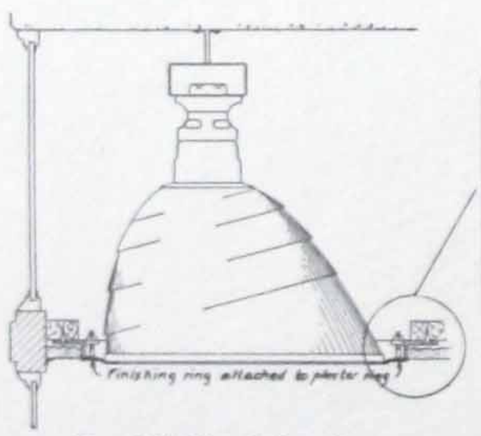


No. 913 Installed

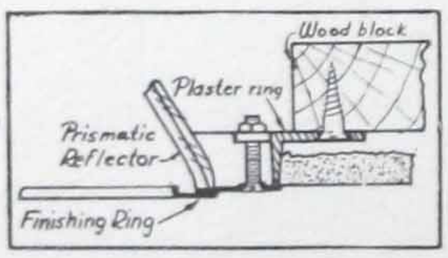
No. 914



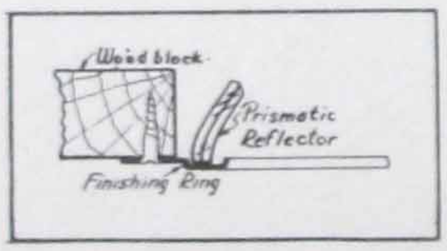
No. 914 Installed



No. 916 Flush in plaster ceiling



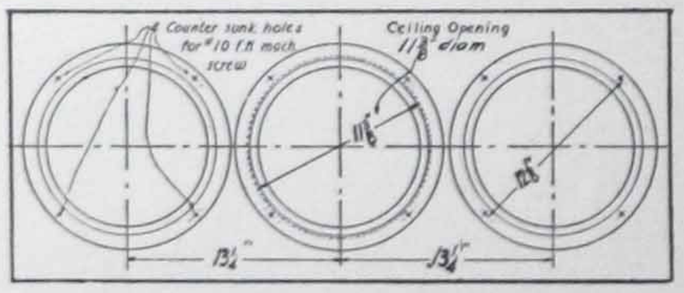
Plaster and finishing ring installed



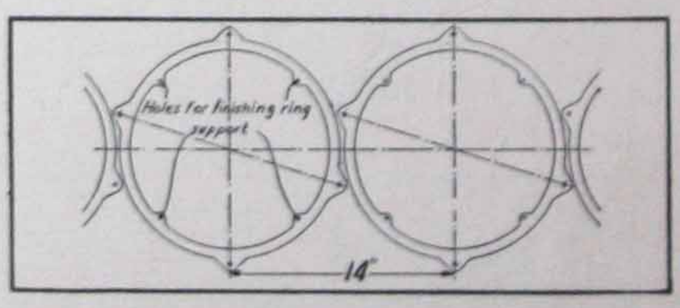
Finishing ring installed

No. 916 Flush in wood ceiling

FLUSH INSTALLATION DETAILS

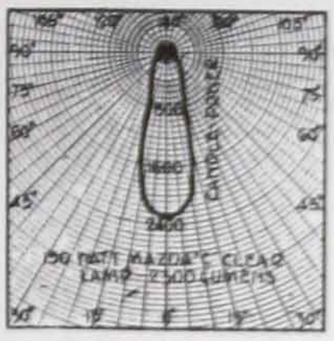


Minimum spacing for flush installation in wood ceiling using finishing ring



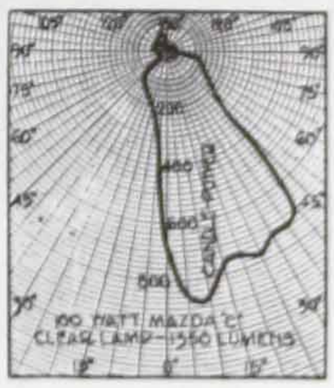
Minimum spacing for flush installation in plaster ceiling using finishing and plaster rings

No. 963



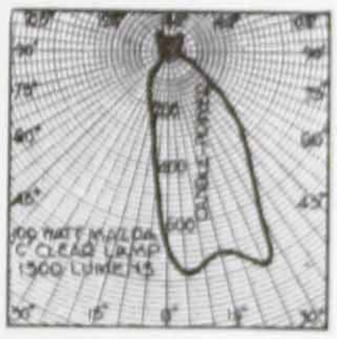
Use—For medium sized shallow windows.
Spacing—12 inches on center. May be spaced as close as 11 inches. Not recommended more than 18 inches apart.

No. 981-983



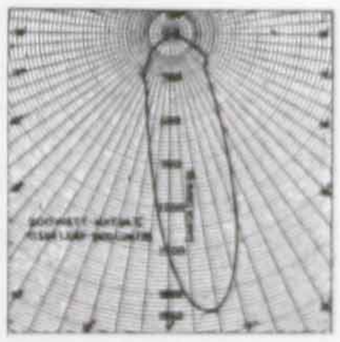
Use—For small and medium sized, average depth windows.
Spacing—No. 981—9 to 12 inches on centers. Never more than 18 inches
No. 983—12 inches on centers. Never more than 18 inches.

No. 922



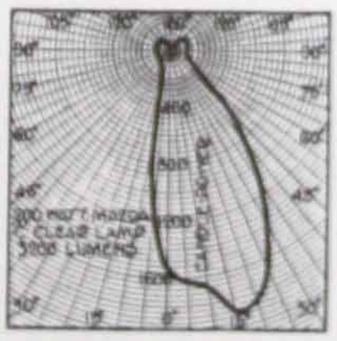
Use—For medium sized windows of average depth with open backs and island windows.
Spacing—12 inches on center. May be spaced as close as 10 inches. Not recommended more than 18 inches apart.

No. 940



Use—For medium sized shallow windows.
Spacing—12 inches on centers.

No. 944



Use—For large windows with open or closed backs and for island windows.
Spacing—12 inches on center.

HOLDERS

Appleton No. 7319 Holder

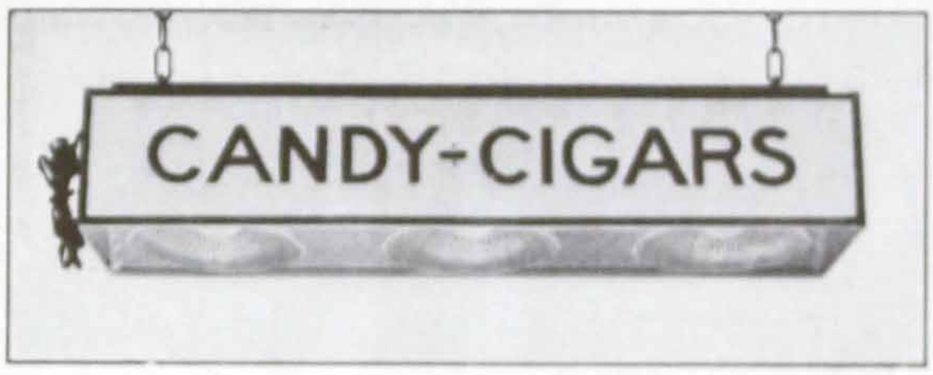
P and S No. 119 O-Holder

"O" to "H" Adapter

No. 938 with Bottom Plate Pendant

Description and Use—Combination of prismatic Reflector and special lens in one unit. Permits flush, recessed installation preserving unbroken ceiling lines and entirely conceals the bare lamp.
Spacing—12 to 15 inches on center.

No. 935—Similar to No. 938 except prismatic bottom plate produces concentrated light distribution. Fine for shallow windows or for supplementary lighting in exceptionally deep windows.
Spacing—Minimum—12 inches on centers.



No. T-981-3 Trough Sign

A complete portable window lighting unit with chains, hooks, extension cord and plug, ready to install. Has three prismatic Reflectors held in a rigid, durable metal trough. Glass panel on one side permits application of advertising material. Finish: Outside sprayed bronze, inside sprayed aluminum.

SCHEDULE "R" DISCOUNTS

No. Catalog	List Price Each	Std. Pkg. Qty.	Std. Pkg. Wt. Lbs.	Mazda Lamp	Dimensions in Inches Diam.	Height	Holder
916	$4.75	8	58	200	11	9¼	2¼-O
914	6.85	8	58	200	11	11¾	....
913	6.20	8	60	200	11	11½	....
Plaster ring 0700	1.50	8	28	....	17	⅝	....
Finishing ring 0701	1.00	8	16	....	13	¼	....
963	3.00	8	23	100-150	10⅝	5¼	2¼-H
981	2.00	30	60	100	8½	5	2¼-H
983	3.00	8	23	100†-150	10⅜	6½	2¼-H
922	4.50	8‡	42	100†-150	9½	7½	2¼-H
935	6.00	8	80	150	12	7¾	2¼-O
938	6.00	8‡	80	150	12	7⅜	2¼-O
940	4.40	8	80	150	12	7	2¼-O
944	6.00	8‡	90	200	10	9¼	2¼-O
					Length		Depth
T-981-3	25.00	1	25	3-100 W-IF	36		8¾

HOLDERS

Appleton 7319	.60	50		2¼-H
P and S 119	.30	50		2¼-O
O to H Adapter	.80	50		O-H

†Use ¾" socket extension with 100 watt lamp, or change to form "O" holder. Color filters for any of the above reflectors consisting of 4 filters (1 red, 1 green, 1 blue and 1 amber) can be purchased at $5.80 list, per set; standard quantity same as reflector on which they are to be mounted.
‡These units are packed in individual cartons.

HOLOPHANE Institutional

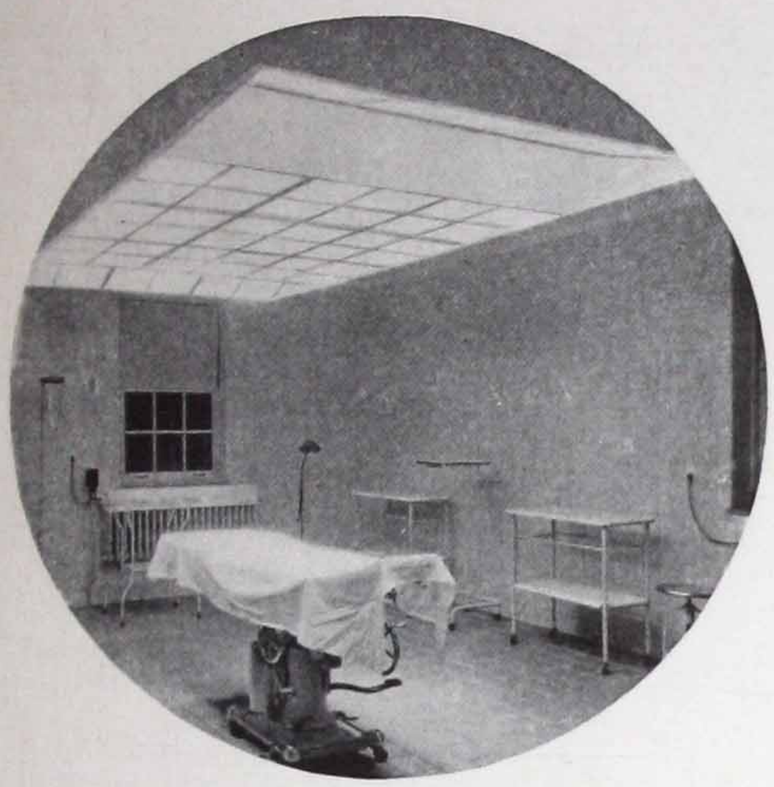
A careful analysis of the lighting requirements of a modern type General Hospital, plus the important consideration of the need for economy, results in the application of Holophane Specifics designed to meet the special lighting needs of the area treated. The exacting demands of surgery lighting, the need for restful illumination for bed areas, and full realization of light control efficiency for all utility locations are adequately met. Below is a chart indicating hospital locations and the proper Holophane Hospital Specific for each.

TYPICAL HOSPITAL LIGHTING SCHEDULE

Location	Recommended Lighting Unit	Foot Candles	Page
Operating Department			
Surgeries: Major	M.C.L.S.—M.S.L.S.	1000	33-34
Ear, Nose and Throat	M.S.L.S.	1000	34
Eyes	M.S.L.S.	1000	34
Dental	D.S.L.S.	200	34
Delivery	M.S.L.S.	200	34
First Aid and Emergency	M.S.L.S.—742	150	34-37
Amphitheatres	M.C.L.S. or M.S.L.S.	1000	33-34
Anesthesia Rooms	Vaporproof	10	20
Cleanup Rooms	R-r*	10	25
Instrument Rooms	R-r*	10	25
The Clinical Department			
Examination Rooms	742	General 10 / Local 150	37
Treatment Rooms	742	10	37
Waiting Rooms	Filterlite	5	26
Prescription Department	R-r* 02176	20	25-29
Research and Photography			
Anatomical Laboratories	02490-JDW; 1108-S	25	16
Physical Laboratories	R-r*	20	25
Chemical Laboratories	Vaporproof or R-r*	20	20-25
Dark Rooms	02208-Ruby		20
Plate Rooms	Filterlite	5	26
Film Storage	Vaporproof	5	20
Educational Department			
Lecture Rooms	Filterlite—In-Bilt	10	26-6
Study Rooms	Filterlite	10	26
Libraries	Filterlite—Bookstack Specifics	10	26-29
Museum	Filterlite—In-Bilt	10	26-6
Chart Rooms	02076, 02176, In-Bilt	10	29-6

*R-r means Reflector-Refractor.

Location	Recommended Lighting Unit	Foot Candles	Page
Sick Rooms			
Public Wards	Twilite	3	36
Semi—Private Wards	Twilite	3	36
Private Rooms	Twilite—In-Bilt	3	36-6
Psychiatric Rooms	A-765—HF-739	3	35
Rest Rooms	Filterlite	3	26
Service Rooms			
Barber Shops	Filterlite	20	26
Battery Rooms	Vaporproof	5	20
Electric Equipment Spaces	Lobay Specifics	5	14
Boiler Rooms	Lobay Specifics	5	14
Fuel Storage	Lobay Specifics	5	14
Kitchen	R-r*—In-Bilt	25	25-6
Laundries	Lobay Specifics	25	14
Dining Rooms	In-Bilt—Filterlite—R-500	5	6-26-27
Linen Rooms	R-r*	10	25
Lockers	02076	5	29
Offices	In-Bilt—Filterlite-R-r*	10	6-26-25
Serving Rooms	R-r*	20	25
Staff Rooms	R-r*	10	25
Sterlizing Rooms	R-r*	10	25
Telephone Spaces	R-r*	10	25
Toilets	Small Reflectors	5	38
Utility Rooms	R-r*	10	25
Traffic Areas			
Ambulances Entrances	"Wide-Spred'	1	23
Delivery Platforms	"Wide-Spred"	1	23
Lobbies, Foyers, Reception Rooms and similar areas for visiting public	In-Bilt—Filterlite	5	6-26
Parking Areas	"Wide-Spred"	1	23
Public Corridors	In-Bilt—C-2172	3	29
Service Corridors	C-2172	3	29



Typical Multiple Control Lens System (Exposed) in Major Surgery

The development of the Holophane Multiple Controlens System for the lighting of Major Surgeries has proceeded logically from a thorough study of the demands made upon artificial lighting by modern surgery technique, through an experimental series of lighting systems built in the Holophane Laboratory, to the final design which is now in use in hospitals throughout the world.

The lighting problem was:

(*a*) How to put enough light on the wound from many directions to stand the high absorption and shading loss.

(*b*) How to confine this super-intensity to the wound area.

(*c*) How at the same time to spread sufficient light around the room to prevent eye-adaptation difficulties, and yet not so much as to compete with the wound illumination.

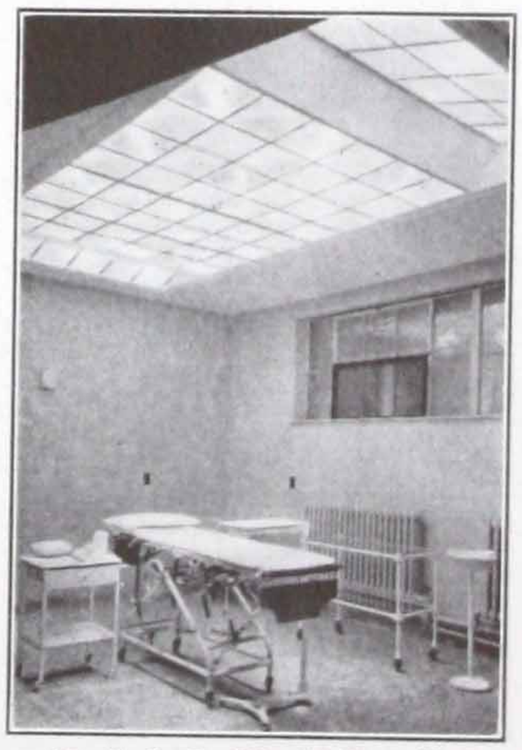
(*d*) How to accomplish all this at a cost commensurate with the value of the lighting effect produced.

All this was accomplished by the Holophane M. C. L. S. with the advantages listed below. The system provides a number of light beams converging to form a high intensity spot on the operating area. It assures adequate light without glare, shadows or heat. It is a permanent part of the room construction and requires no adjustment or attention during an operation. It is well outside the zone of explosion hazard. Summing up, a Holophane "Controlens" System presents a most modern, complete, satisfactory method available for meeting the exacting lighting requirements and overcoming the mechanical difficulties of operating room lighting.

ADVANTAGES—

1. Horizontal illumination 1,000 foot-candles average on operating area.
2. General illumination of the Operating Room so that the brightness of the surroundings is about the same as the interior of the incision. (The seeing conditions in "looking up" do not change.)
3. The direction of the light may be varied without moving the fixture.
4. Adequate diffusion and absence of harmful shadows.
5. High vertical illumination.
6. Glareless, comfortable light.
7. Multiple lamping (some devices put only one lamp between life and death).
8. Reasonable cost of installation, operation and maintenance.
9. All enclosed and dirt-resisting.
10. No mirrors that permit conscious patients to observe their operation.

The M. C. L. S. is a self-contained unit consisting of all metal housing; top primed white inside, hospital gray Duco outside, sides and sash given one primary coat; complete with sockets, holders, reflectors, and lenses; wired in separate circuits collected in junction box ready for connection to power supply. It is shipped knocked down in such a way as to make assembly and erection easy. It is usually installed flush in a furred ceiling but may be mounted exposed if so desired. Metal strip for finishing ceiling around the unit is not part of the standard installation and is not included in prices given below.

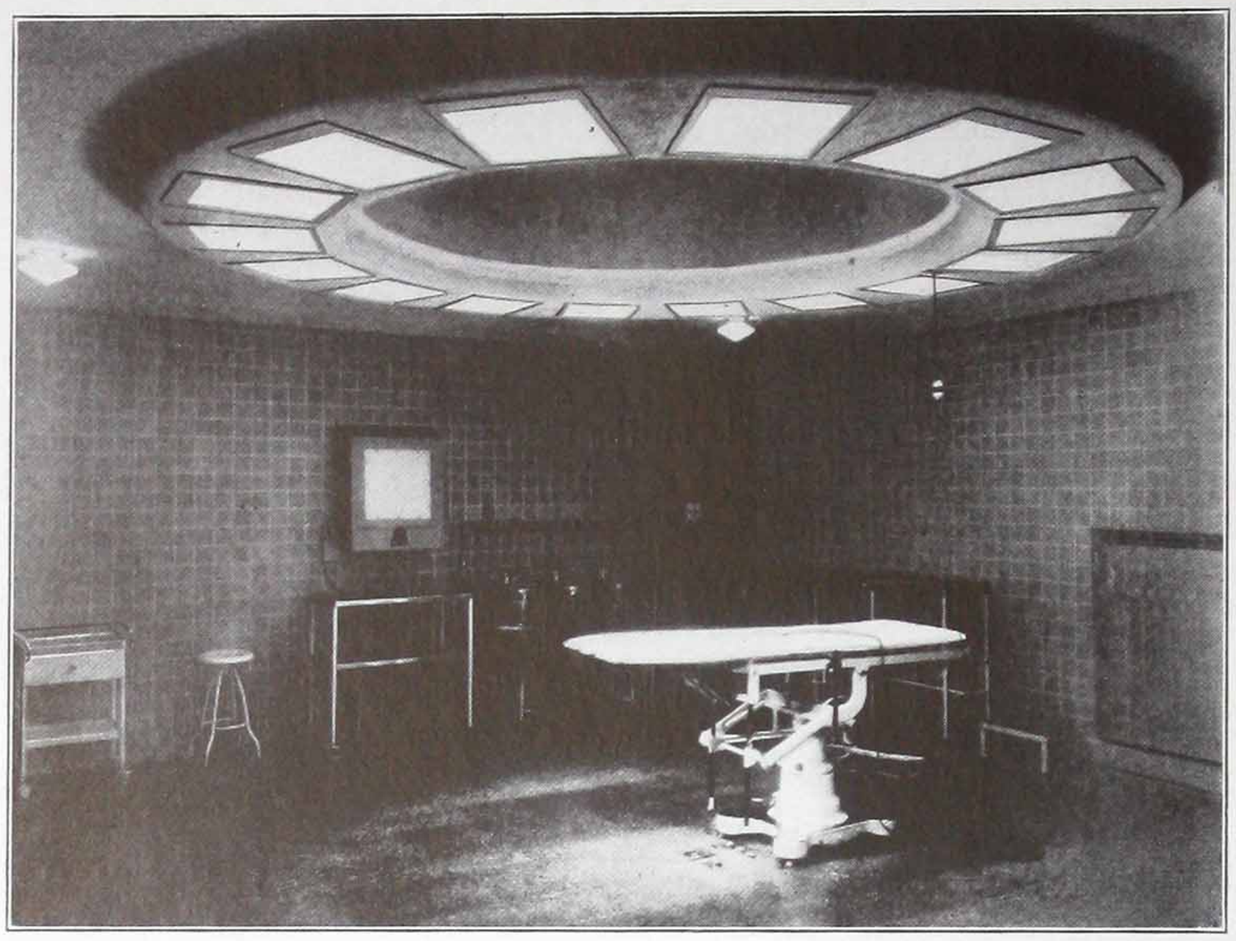


M. C. L. S. (Flush) Installed

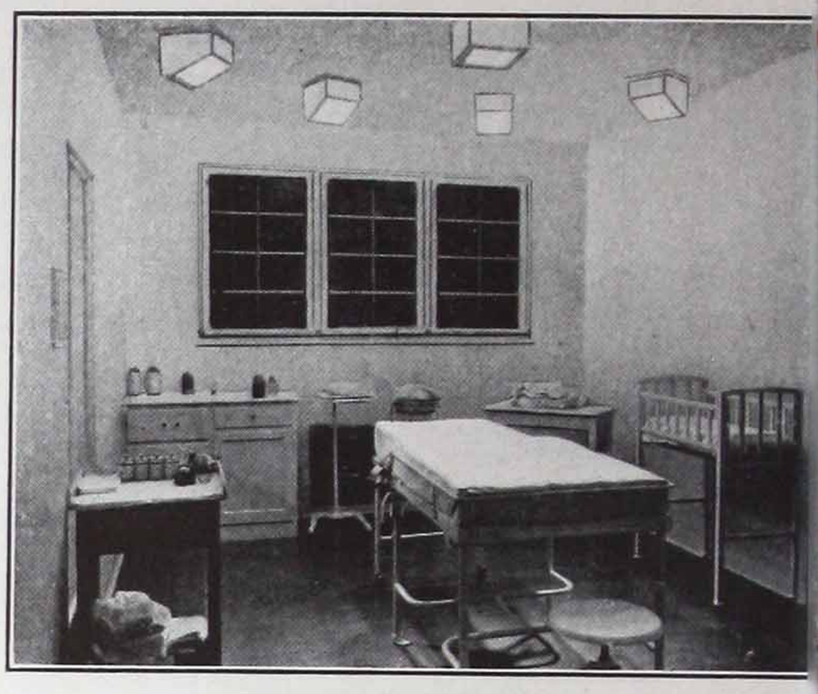
SCHEDULE "L" DISCOUNTS

Unit No.	For Mounting Heights	List Price Each	Standard Quantity	Weight Installed	Dimensions			Mazda Lamp*
					Length	Width	Depth	
15-M.C.L.S.	8′-6″— 9′	**$735.00**	1	1000	11′-6⅛″	6′-6½″	1′-10½″	15-150W.
18-M.C.L.S.	9′-6″—11′	**785.00**	1	1150	13′-7⅜″	6′-6½″	1′-10½″	18-150W.
21-M.C.L.S.	11′-6″—12′	**930.00**	1	1300	15′-7⅞″	6′-6½″	1′-10½″	21-150W.

*200 watt lamps may be used over the tilted end lenses if higher vertical illumination is desired, but this must be so stated when ordering so that the necessary changes in socket positions may be made.
IMPORTANT: When ordering state mounting height (distance from floor to bottom of sash).



Operating Room, Institute of Opthalmology
Columbia Presbyterian Medical Center, New York, N. Y.

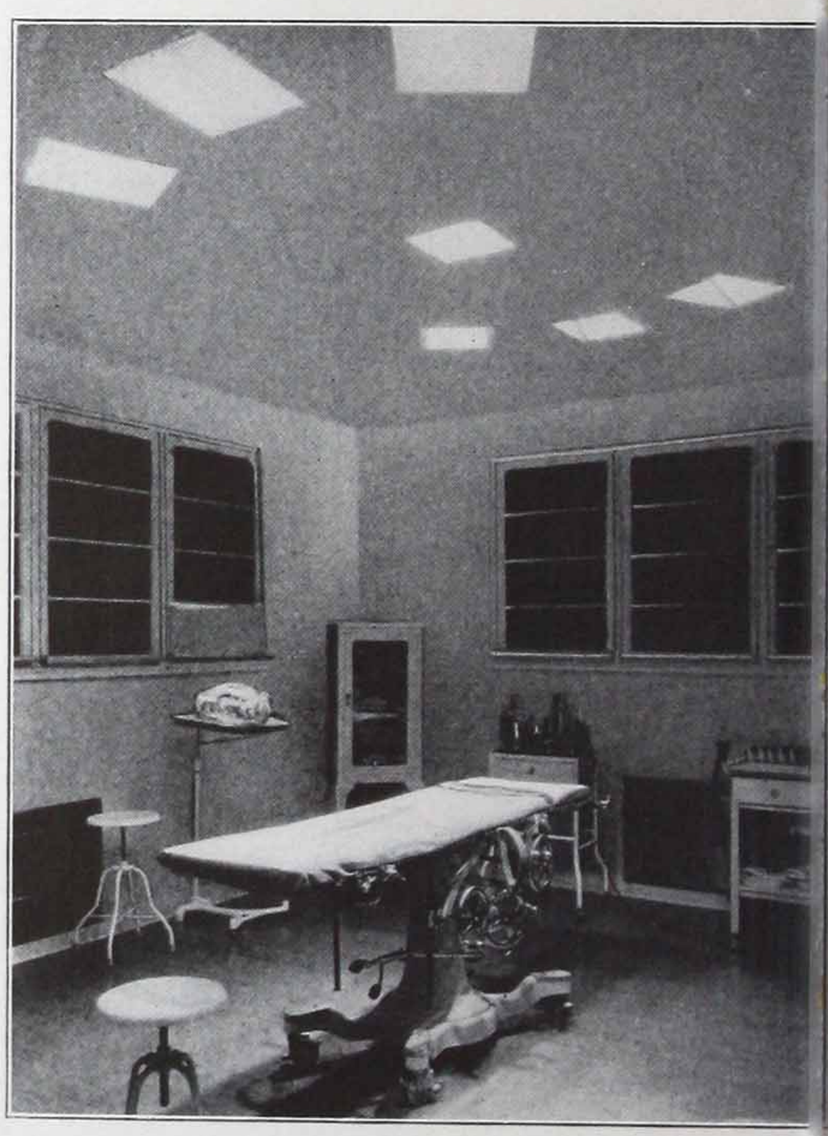


No. 5 M. S. L. S. in Delivery Room

The Holophane Multiple Spot Lens System was originally designed for Minor Surgery; Delivery; Ear, Eye, Nose and Throat surgery illumination. The practicability of the system from an operating standpoint, its flexible adaptation to unusual structural conditions and its low cost have made it popular even for major surgery use. The system embraces many of the desirable qualities of the M. C. L. S., viz:—absence of shadows, multiple lamping, heat elimination and adequate general room illumination.

A number of individual Controlens units for either exposed or recessed installation compose the system. Each of the Controlens units is arranged to contribute a beam of light to a spot at the operating site.

The size of the various systems ranges from three boxes, for dental surgery use (No. 3 D. S. L. S.) to whatever number is necessary to provide proper illumination for the type of surgical work performed. A number of the more common arrangements are listed below.

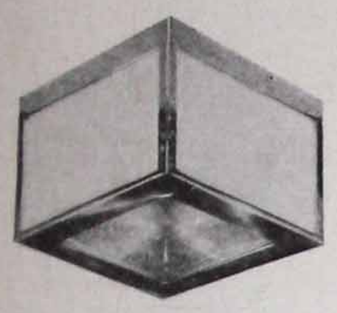


No. 7 M. S. L. S. in Minor Surgery

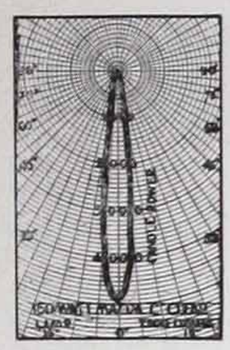
SCHEDULE "L" DISCOUNTS

Catalog Number	List Price Each	Standard Quantity	Shipping Weight Standard Quantity	Spacing Installation Data	Lamp Wattage
3 D.S.L.S. (Exposed)	**	1	45	Write for Engineering Data Sheets on Dental Exposed, Minor, and Delivery Multiple Spot Lens Systems	3–150
5 M.S.L.S. (Exposed)	$100.00	1	66		5–150
5 M.S.L.S. (Flush)	120.00	1	217		5–150 or 200†*
7 M.S.L.S. (Exposed)	140.00	1	85		7–150
7 M.S.L.S. (Flush)	170.00	1	352		7–150 or 200†*
11 M.S.L.S. (Exposed)	220.00	1	130		11–150
11 M.S.L.S. (Flush)	270.00	1	487		11–150 or 200†*

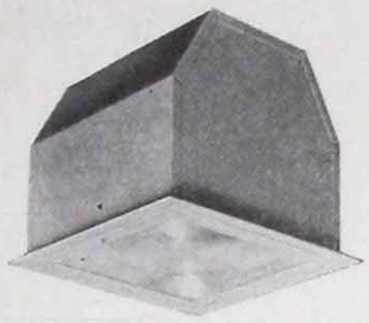
*When 200 watt lamps are to be used kindly advise when ordering.
**Price on application.
†Use 7/8" socket extension with 100 watt lamp.



D-729-L



Characteristic Distribution

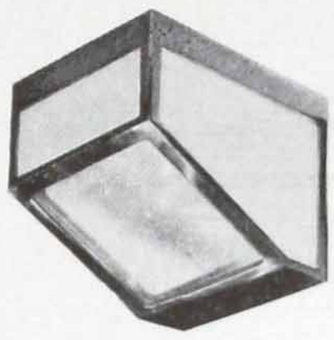


H-755-FL

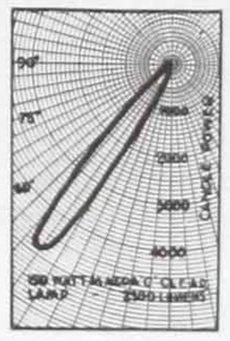
These units are used in combination to form the lighting systems for surgeries. Individually they have many uses in built-in lighting for exposed or recessed installation.

The H-755-TF and FL units for recessed installation are made up of a 16-gauge steel roughing box finished inside aluminum glyptal lacquer, outside grey baked enamel. The face carrying the lens is separate, of 12-gauge steel and is held to the box by 4 mounting screws. Finish, prime coat grey baked enamel. The "Controlens" slides into a steel pocket and is held by bronze clips. Door has two 1½-inch butt hinges and one thumb screw catch. Holophane Reflectors and proper holders complete the units.

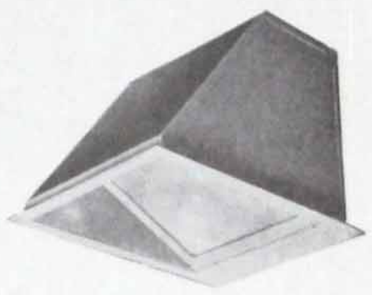
The D-729-T and L units for exposed mounting are composed of a Holophane "Controlens" held in a cast aluminum frame, the outside of which is finished polished aluminum. The sides of the box are opal diffusing glass to permit pleasing ceiling illumination from the unit. The internal construction includes a polished aluminum reflector and receptacle for 150-watt lamp. Both types are subject to variation in beam width and direction to meet special requirements but when used for surgical work are set for the most efficient beam characteristic as shown in the curves.



D-729-T



Characteristic Distribution

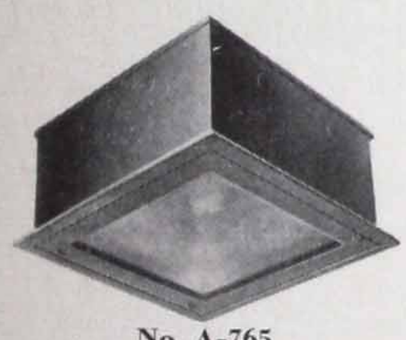


H-755-TF

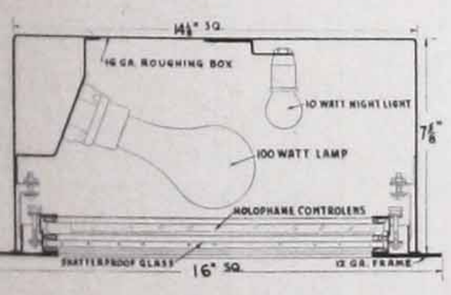
SCHEDULE "L" DISCOUNTS

Catalog Number	List Price Each	Standard Quantity	Shipping Weight Standard Quantity	Overall Dimensions**			Lamp Wattage
				Length	Width	Depth	
D-729-L	**$20.00**	1	18	11″	11″	7½″	100†-150
D-729-T	**20.00**	1	18	10⅝″	9⅜″	8½″	100†-150
H-755-FL	**20.00**	1	37	15¼″	15¼″	12½″	150-200*
H-755-TF	**25.00**	1	45	20⅞″	15⅛″	14¼″	150-200*

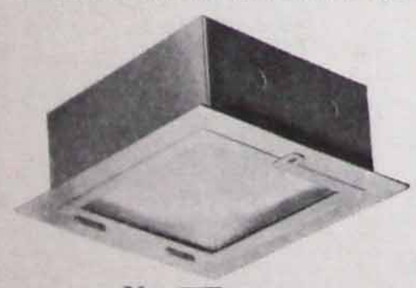
*When 200 watt lamps are to be used kindly advise when ordering.
†Use ⅞″ socket extension with 100 watt lamp. **Dimensions are approximate. Write for approved drawings if exact dimensions are required for installation.



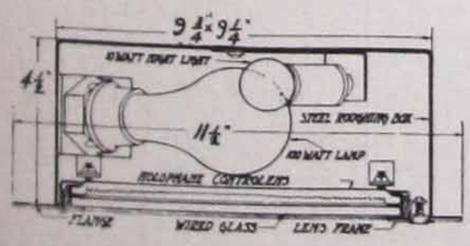
No. A-765



Sectional Detail of No. A-765



No. HF-739



Sectional Detail of No. HF-739

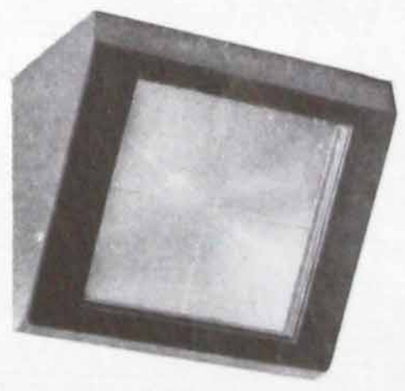
Holophane Psychiatric Units, Nos. A-765, HF-739 are for use in maximum and medium security locations respectively.

No. A-765 is of rugged tamper-proof construction. The front section holding the lens and shatter-proof glass is secured to the roughing box by four special safety screws. The exposed metal parts are baked enamel finish.

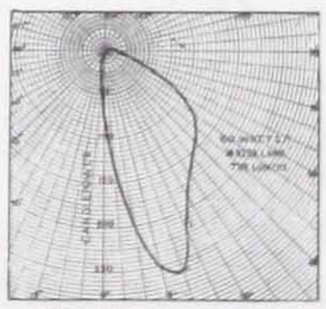
HF-739 is smaller and lighter in construction. The lens and protective wire glass are held in a hinged door in the front frame. A special catch guards against opening by unauthorized persons. Outside of unit is finished gray baked enamel prime coat.

Both units have night light feature and are finished inside G. E. aluminum glyptal lacquer.

The Holophane **Jail Unit** No. J-729 employs a Holophane "Controlens" mounted behind shatter-proof glass in a tamper-proof housing. Lamp and reflector assembly is mounted on a strap fastened to the side of the housing. Provision for relamping is provided through the back of the unit.



No. J-729



Distribution Curve No. J-729

SCHEDULE "L" DISCOUNTS

Complete Unit	List Price Each	Standard Quantity	Shipping Weight Standard Quantity	Dimensions	Mazda Lamp
HF-739**	**$14.00**	4	100	See Diagrams Above	1-100 watt and 1-10 watt
A-765	**25.00**	1	50		
J-729	**18.50**	4	46		60

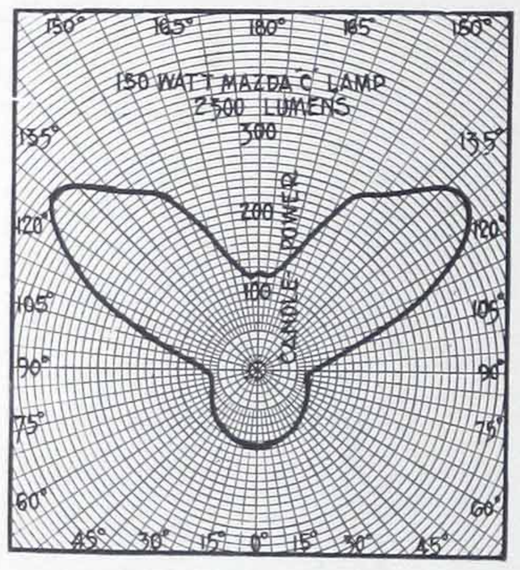
**For omission of night light feature deduct $0.40 from list price; omission of protective glass deduct $0.80 from list price.

For locations where patients are housed, an ideal lighting unit is one producing semi-indirect light distribution with extremely low brightness assuring maximum visual comfort.

Holophane "Twilites" provide two levels of semi-indirect illumination, one for reading or medical examination and the other for night lighting. Nos. C-7326-R and S-7326-R are respectively ceiling and suspension type with one central socket for 100 watt lamp and one auxiliary or night light socket for 3 or 5 watt lamp on a separate circuit. Nos. C-7346-R and S-7346-R are respectively ceiling and suspension type for 100 or 150 watt central light and two auxiliary or night light sockets for 3 or 5 watt lamps on a separate circuit. Fixtures and glass are stream line design to resist dust and dirt accumulation.

Fixtures are No. 22 gauge brass. Ceiling type fixtures are provided with canopy cross bar and barrel nuts for mounting. Suspension fixtures are of rigid stem, ball and swivel construction with slip canopy and are arranged for direct attachment to outlet box by suitable hickeys and extensions furnished by the contractor. Wire is furnished but fixtures are **not** wired. Standard finish is satin nickel. Other finishes quoted on request. Pull chain canopy switch can be furnished at $1.50 list extra.

No. S-7326-R, S-7346-R



Characteristic Curve

No. C-7326-R, C-7346-R

SCHEDULE "R" DISCOUNTS

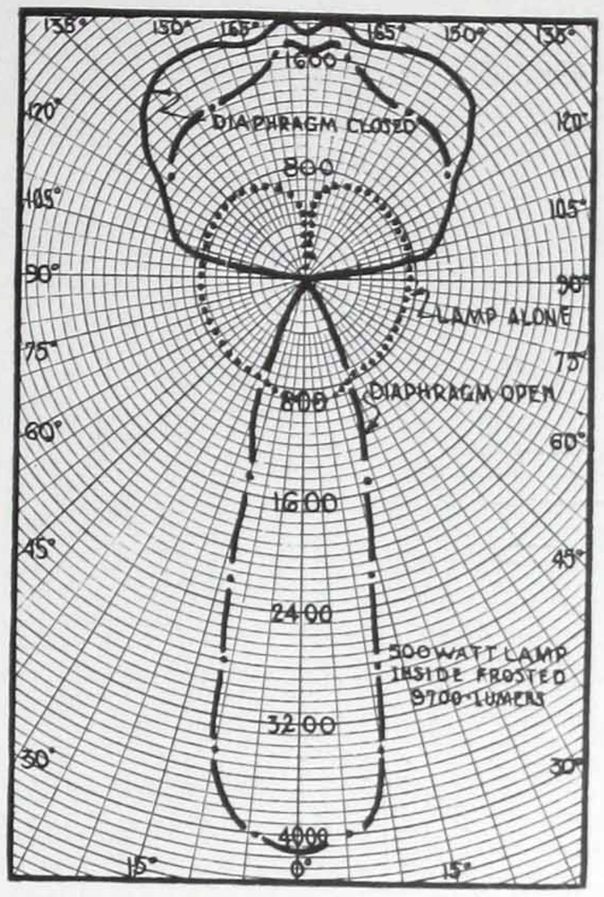
Complete Unit	Fixture No.	Glass No.	List Price Each	Std. Quant.	Ship. Weight Std. Qt.	Dimensions		Mazda Lamp
						Diameter	Depth	
C-7326-R	....	....	$17.50	5	90	12″	14⅞″	1-100 watt
	0503	....	8.50	5	20	5¼″	4⅜″	1-3 or 5 watt lamp
		7326*‡	9.00	5	70	12″	11¼″	1-100 watt 1-3 or 5 watt lamp
S-7326-R	....	....	20.00	5	95	12″	33¼″	1-100 watt
	0484	....	11.00	5	25	4⅜″	22¾″	1-3 or 5 watt lamp
		7326*‡	9.00	5	70	12″	11¼″	1-100 watt 1-3 or 5 watt lamp
C-7346-R	....	....	24.00	4	100	14″	17⅜″	1-100† or 150
	0504	....	11.00	4	16	6⅛″	4⅝″	2-3 or 5 watt lamps
		7346**‡	13.00	4	84	14″	13½″	1-100† or 150 2-3 or 5 watt lamps
S-7346-R	....	....	28.00	4	105	14″	35½″	1-100† or 150
	0485	....	15.00	4	21	5⅞″	22¾″	2-3 or 5 watt lamps
		7346**‡	13.00	4	84	14″	13½″	1-100† or 150 2-3 or 5 watt lamps

†Use ⅞″ socket extension with 100 watt lamp.
*Can be supplied with opaque liner at $1.00 list additional.
**Can be supplied with opaque liner at $1.25 list additional.
‡These units are packed in individual cartons.

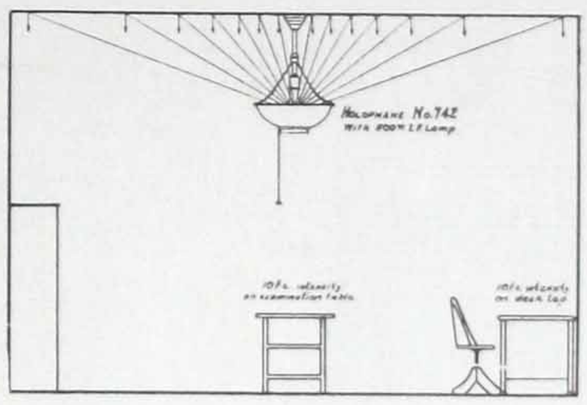
The New Holophane Medical Examination Unit

provides the two requisites for ideal examination office lighting; adequate general illumination for routine work, a powerful beam of concentrated light for examination purposes—both from a single unit.

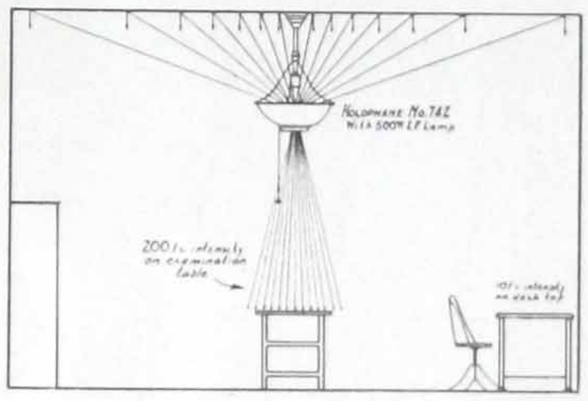
No. 742



Characteristic Curves



General Illumination—
Diaphragm Closed



Examination Use—
Diaphragm Open

No. 742 is composed optically of two distinctly different elements. One element is a white porcelain enamel Reflector bowl for indirect lighting; the other a concentrating prismatic Controlens to give a strong downward component of light. The amount of downward light can be varied from 0 to 4000 candlepower by turning a Bakelite knob suspended at the bottom of the unit which opens a diaphragm covering the Controlens.

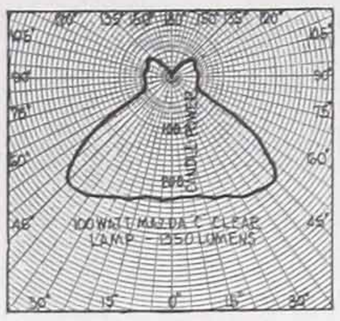
The optical elements are supported by a tripod holder to a plain stem with canopy. This method of support makes for easy maintenance as the bowl can readily be removed. A mogul base socket is supplied. The canopy has a knockout for a levolier switch. The bowl is finished in white porcelain while the tripod, stem and canopy are finished satin nickel. The fixture is furnished NOT WIRED and without inside frosted lamp.

The Medical Examination Unit is a clinical appurtenance of impressive appearance and dual use. It assures the Doctor adequate general illumination at all times and also provides examination light without the inconvenience generally experienced by the use of accessory lighting equipment for this function.

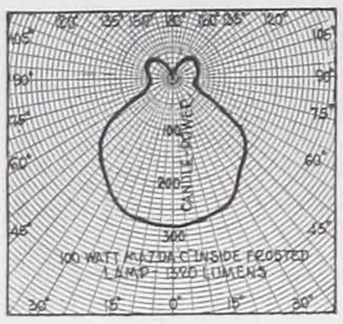
This type of lighting is also suitable for first aid rooms in schools, colleges, arenas, industrial plants, sport fields, etc. . . . Rubbing rooms in gymnasiums, turkish baths, etc. . . . Small display rooms . . . Examination rooms in clinics, colleges, army posts, C.C.C. Camps, naval stations, recruiting offices, etc. . . . Morticians' embalming rooms . . . For taxidermists in museums . . . For factory superintendents' offices and for various industrial inspection operations.

SCHEDULE "R" DISCOUNTS

Complete Unit	List Price	Std. Quantity	Ship. Weight Std. Qt.	Dimensions		Mazda Lamp
				Diameter	Depth	
742	$24.00	4	92	21¼″	36″	500 W-I-F



Curve of CSE Type Super-Ficiency Extensive



Curve of CSI Type Super-Ficiency Intensive

Small Mazda lamps have a low lumen per watt output. It is fundamentally sound, therefore, to endeavor to utilize to the fullest advantage the greatest amount of light possible from these low wattage sources. Holophane Xtra-ficiency and Super-ficiency reflectors when used with these lamps assure the greatest efficiency possible.

Typical for
Nos. C-CSE-R CXE-R
C-CSI-R CXI-R
CXF-R

Typical for
Nos. B-CSE-R B-XE-R
B-CSI-R B-XI-R
B-XF-R

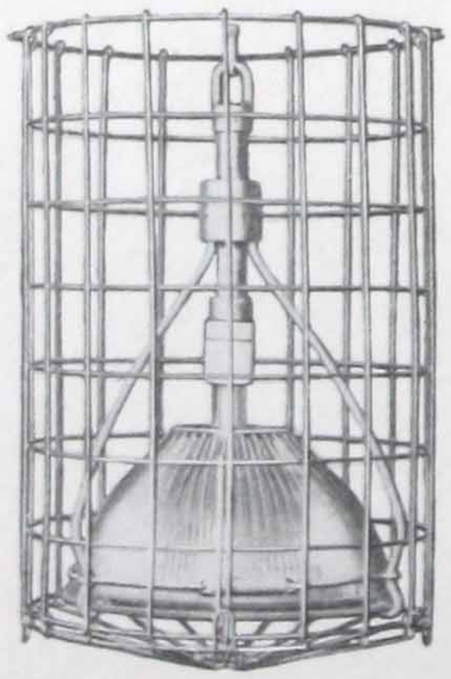
Nos. XE
XI
XF

Nos. B-2110-R
B-2120-R
B-2170-R

SCHEDULE "R" DISCOUNTS

GLASS ONLY				BRACKET TYPE				CEILING TYPE			
Catalog No.	List Price Each	Standard Quantity	Lamp Size	Catalog No.	List Price Each	Standard Quantity	Lamp Size	Catalog No.	List Price Each	Standard Quantity	Lamp Size
XE-25	$ .90	20	25	B-XE-25-R	$3.90	20	25	C-XE-25-R	$3.70	20	25
XE-40	1.05	10	40	B-XE-40-R	4.05	10	40	C-XE-40-R	3.85	10	40
XE-60	1.15	8	60	B-XE-60-R	4.15	8	60	C-XE-60-R	3.95	8	60
XI-25	.90	20	25	B-XI-25-R	3.90	20	25	C-XI-25-R	3.70	20	25
XI-40	1.05	10	40	B-XI-40-R	4.05	10	40	C-XI-40-R	3.85	10	40
XI-60	1.15	8	60	B-XI-60-R	4.15	8	60	C-XI-60-R	3.95	8	60
XF-25	.90	20	25	B-XF-25-R	3.90	20	25	C-XF-25-R	3.70	20	25
XF-40	1.05	10	40	B-XF-40-R	4.05	10	40	C-XF-40-R	3.85	10	40
XF-60	1.15	8	60	B-XF-60-R	4.15	8	60	C-XF-60-R	3.95	8	60
.....	....	..	..	B-2110-R	6.00	12	75-100	.....	....	..	..
.....	....	..	..	B-2120-R	8.00	8	100†-150	.....	....	..	..
.....	....	..	..	B-2170-R	8.25	8	100†-150	.....	....	..	..
CSE-75	1.40	10	75-100	B-CSE-75-R	4.40	10	75-100	C-CSE-75-R	4.20	10	75-100
CSE-100	1.75	8	100†-150	B-CSE-100-R	4.75	8	100	C-CSE-100-R	4.55	8	100
CSI-75	1.40	10	75	B-CSI-75-R	4.40	10	75-100	C-CSI-75-R	4.20	10	75-100
CSI-100	1.75	8	100†-150	B-CSI-100-R	4.75	8	100	C-CSI-100-R	4.55	8	100
CSE-200	3.40	6	200								
CSI-200	3.40	6	200								

†Use 7/8" socket extension with 100 watt lamp.



Wire Guard (C Type)

Wire Guard (S Type)

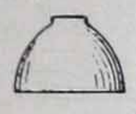
For low ceiling areas Holophane hemispheres are the first step toward overcoming difficulties generally experienced by the use of hanging fixtures in such locations.

C-1011, C-1211, C-1411

Holophane Hemispheres, Nos. C-1011, C-1211, C-1411 comprise a prismatic hemisphere held by three set screws in a satin nickel finish ceiling fixture with sockets for main lamp and night light set in proper position.

Catalog Number	List Price	Std. Qty.	Schedule
C-1011	$9.40	3	I
C-1211	11.50	3	I
C-1411	18.75	3	I
S Type Wire Guards			
622-652-671-671-AL	3.65	5	I
681-AL	4.25	5	I
691-AL	4.85	5	I
C Type Wire Guards			
622-652-671-671-AL	6.05	5	I
681-AL	7.15	5	I
691-AL	10.45	5	I

Actual Depreciation of Lighting Equipment as Affected by Equipment Design*

Luminaire	Description	Actual Depreciation 120 Days Dry Fine Dust
1 	Dense opal glass—clear lamp	11.2
2 	**Prismatic** glass—clear lamp	**12.4**
3 	Deep enameled steel bowl—clear lamp	11.5
4 	RLM Dome—clear lamp	12.8
5 	RLM Dome—bowl-enameled lamp	16.3
6 	Diffusing globe and enameled steel reflector	22.9
7 	Diffusing globe—no vent	13.4
8 	Diffusing globe—bottom vent	22.7

Luminaire	Description	Actual Depreciation 120 Days Dry Fine Dust
9 	Frosted ball—top and bottom open	15.0
10 	Semi-closing opal bowl with diffusing plate	27.2
11 	Dense opal bowl	22.5
12 	Enameled metal reflector with opal glass bottom	26.0
13 	Mirrored glass bowl	26.2
14 	Clear top with bottom opening	35.6
15 	Clear top without bottom opening	15.0
16 	**Prismatic,** without bottom opening	**10.1**

*Transactions of Illuminating Engineering Society, Anderson and Ketch, Vol. XIX, No. 1.

DATA ON MAZDA AND HIGH INTENSITY MERCURY VAPOR LAMPS

MAZDA LAMPS

(Standard Lighting Service 110-125 Volts)

Size of Lamp Watts	Type Bulb	Lumens	Light Center† Inches	Overall Length Inches (Max.)
15	A-17	138	$2\frac{3}{8}$	$3\frac{5}{8}$
25	A-19	252	$2\frac{1}{2}$	$3\frac{15}{16}$
40	A-19	432	$2\frac{7}{8}$	$4\frac{1}{4}$
60	A-21	750	$3\frac{3}{8}$	$4\frac{15}{16}$
75	A-21	1035	$3\frac{7}{8}$	$5\frac{5}{16}$
100	A-23	1520	$4\frac{3}{8}$	$6\frac{1}{16}$
150	PS-25	2415	$5\frac{1}{4}$	$6\frac{15}{16}$
200	PS-30	3400	6	$8\frac{1}{8}$
300	PS-35	5520	7	$9\frac{7}{16}$
500	PS-40	9800	7	$9\frac{13}{16}$
750	PS-52	14550	$9\frac{1}{2}$	$13\frac{1}{8}$
1000	PS-52	20500	$9\frac{1}{2}$	$13\frac{1}{8}$
1500	PS-52	33000	$9\frac{1}{2}$	$13\frac{1}{8}$

HIGH INTENSITY MERCURY VAPOR LAMPS

220-240 Volt Service

250	T- 9-Clear	7500	5	8
400	T-16-Clear	16000	$7\frac{3}{4}$	13

†Light center length is distance from contact point of lamp to center of filament.

A GUIDE FOR MODERN ECONOMICAL ILLUMINATION INTENSITIES

The illumination intensities in foot-candles measured on a horizontal plane (unless otherwise noted) shown in the following table are a guide to modern economical practice. Higher intensities are sometimes desirable to meet special conditions or requirements. The intensities indicated are above the average but are based on a conservative estimate of the average of good modern installations.

COMMERCIAL LIGHTING

Type of Interior	Foot-Candles Recommended	See Page
Aisles	3	17–21
Armory:		
Drill Shed	10	18, 19
Exhibition Hall	10	14
Offices	10	26, 27
Art Gallery:		
General	10	Controlenses
Paintings	20	
Auditoriums	10	25, 27-In-Bilt
Automobile Show Rooms	15	25, 27-In-Bilt
Banks:		
Cages and Offices	15	26, 27
Lobby	10	Orn Hol.
Barber Shops	15	26, 27
Billiard:		
Room	5	Special
Tables	25	Special
Bowling Alleys	10	31
Pin Pit	25	35
Boxing Ring	100–1200	18, 19
Broadcasting Studios		6
Cafe:		
General	10	6–35
Churches:		
School Room	10	26, 27
Nave	5	35
Pulpit	10	Special
Sanctuary	10	31
Club Rooms:		
Lounge	5	Orn. Hol.
Reading Room	15	26, 27
Court Room	10	26, 27
Dance Halls	15	Special
Dental Offices:		
Dental Chair	50–200	34, 35
Operating Office	10	26, 27, 37
Waiting Room	5	25–27
Depot: Waiting Room	5	25–27
Doctors' Offices	10–200	37
Drafting Rooms	25	26, 27
Fire Engine House	5	25
Garages	15	14, 22
Storage—Dead	1	22, 23
Storage—Live	2	22, 23
Washing	20	20

Type of Interior	Foot-Candles Recommended	See Page
Gymnasiums:		
Base Ball (Indoor)	25	18
Basket Ball	25	18
Fencing, Boxing, Wrestling	25	18
Handball Court	15	35, 38
(On playing wall)	25	35
Indoor Tennis	15–100	6–18
Locker Rooms	10	16–17
Main Gym	15	18
Racquet Court	15–100	6–35
Shower Room	10	20
Squash Court	15–100	6–35
Swimming Pool	10	Special
Halls, Interior Passageways	5	29, 38
Hockey Arena	25	18
Hospital	See page	32
Hotels:		
Bedrooms	10	26, 27
Corridors	5	29
Dining Room	5	6, 35
Kitchen	10	25
Lobby	5	6, 35
Writing Room	10	26, 27
Libraries:		
Reading Rooms	15	26, 27
Stack Room	10	29
Lodge Rooms	10	26, 27
Lunch Cars	10	26, 38
Markets	10	25, 28
Mortician	10–200	34, 37
Moving Picture Theatres:		
Auditorium	3	6, 35
Entrance	25	6, 35
Foyer	5	6, 35
Museum		
General	5	Controlenses
On Special Exhibits	25	
Taxidermist	10–200	37
Office Buildings:		
Basement Storage Rooms	2 V.	22
Battery Room	5	20
Carpenter Shop	10	13, 14
Corridors	5	6, 29
Electrician Shop	10	13, 14
Elevators	5	6
Entrance Hall	10	†
Executive Offices	10	6, –†
File Room	10 V.	29
Fire Stairs	2	38
General Office Space	15	25-27

Type of Interior	Foot-Candles Recommended	See Page
Hall-Elevator	5	25
Janitor's Stores	5	14
Locker Rooms	5	29
Paint Shop	10	20
Passage:		
Freight Elevator	5	38
Plumbing Shop	10	14
Private Offices	15	6, 25, 26
Stairs	5	38
Toilets	5	38
Vaults	5	38
Post Offices:		
Cancellation Machine	15	13, 14
Carriers' Paper Case	9 H. 8 V.	13, 14
Carrier Routing Cases	14 H. 8 V.	13, 14
City Letter Cases	7 H. 8 V.	13, 14
Clerks' Letter Separation Cases	11 H. 7 V.	13, 14
Collection Table	15	13, 14
Dispatch Desk	15	13, 14
Parcel Post Separation Racks	15	13, 14
Public Lobby	10	25
Registry Cage	15	13, 14
Time and Special Delivery Desk	15	13, 14
Vestibule	10	25
(For other spaces see "Office Buildings")		
Railway:		
Baggage Checking Office	10	25
Concourse	5	18
Rest Rooms	5	26, 27
Smoking Room	5	26, 27
Storage	2	22
Ticket Office	10	26
Train Platforms	5	16
Waiting Rooms	5	26, 27
Restaurants	10	6–†
Schools:		
Art Room	15	25–27
Auditorium	15	6, 25, 27
Cafeteria	10	25–27
Class Rooms	15	25–27
Corridors	5	29
Domestic Science	15	25
First Aid Rooms	10–200	37
Gymnasium (See this General Heading)		
Janitor's Closets	2	38
Kitchen	15	25
Laboratories	15	20, 25
Locker Room	5	29
Manual Training Shop	15	13, 14
Offices	10	26, 27
Over Stage	15	13, 18, 19
Stairs	5	38
Toilets	5	38
Skating Rink (Indoor)	10	18

†Use ornamental designs. Sketches furnished on request. V—vertical; H—horizontal.

COMMERCIAL LIGHTING

Type of Interior	Foot-Candles Recommended	See Page
Stores:		
Department	20	6, 26-28
Small	15	6, 25-27
Art	15	26, 27
Automobile	20	6, 26-28
Bakery	15	25, 28
Barber Shop	20	26, 27
Beauty Parlors	15	26, 27, 35
Books	10	26-28
Butcher	10	25, 28
Carpet	10	6, 26, 27
Cigar	15	6, 25, 28
Clothing	15	6, 25-28
Confectionery	10	26, 28
Drugs	15	25, 28
Dry Goods	15	26-28
Florist	10	25, 28
Furniture	5	6, 26, 27
Furrier	15	6, 26, 27
Grocery	10	25, 28
Haberdashery	15	6, 26, 28
Hardware	10	25, 28
Hat	10	6, 26, 27
Hosiery	15	26, 27
Jewelry	10–50	16, 25, 28
Leather	10	25, 28
Liquor	10	28, 29
Millinery	15	26, 27
Music	10	26, 27
Notions	10	26-28
Piano	10	26-28
Rug:		
General	15	26, 27
Racks	25	30, 31
Shoes	15	26, 27
Stationery	10	26, 28
Show Windows:		
Business District	100	30, 31
Suburban	40	30, 31
Whiteway	200–500	30, 31
Telegraph	15	26, 27
Telephone	5	29
Veterinary	10–200	35, 37

INDUSTRIAL LIGHTING

Acid Plants	5	20
Aviation Fields:		
Boundary Lights	*	21
Hangar Apron	2	23
Hangars	10	18
Obstruction Lights	*	21
Breweries:		
Boiler Room	10	14, 22
Bottling	15	14
Brew House	2	22
Chemical Laboratory	10	16
Engine House	10	18
Loading Platform	2	22
Pasteurizing	15	14
Stairs	5	14
Warehouse	1	22
Wash House	10	20
Chemical Plants	5	20
Cotton Mills:		
Breaking	6	14
Carding	10	14
Intermediates	10	14
Looms	10	14
Slubbers	10	14
Warpers:		
Beam	10	14
Creel	10	16
Reed	15	14
Distilleries:		
Alcohol Storage	2	20
Alcohol Supply	5	16
Blending Room	5	16
Bottle Washing, Labeling, etc.	10	16
Fermenting	5	16, 22
Mill	5	20
Shipping Room	10	14
Shipping Platform	3	22
Still	3	20
Storage	3	22
Foundry:		
Core Making	15	19
Mould Making	15	19
Pouring	10	18
Sand Mixing	5	18
Storage	2	22
Gasoline Filling Stations	5	22, 23
General Manufacturing—Fine	15	13, 14
General Manufacturing—Rough	10	13, 14
Hosiery Mills:		
Footers	20	17
Knitters	20	16
Leggers	20	17
Loopers	15	14
Seamers	15	31
Industrial Yards	0.25	22, 23
Machine Shops (High Bays)	15	18, 19
Machine Shops (Low Bays)	15	13, 14, 15
Oil Refineries	1–5	20, 22, 23
Outdoor Sub-Station	0.5	21
Outdoor Tennis Courts	25	18
Parking Garages	2	22, 23
Printing:		
Bindery	10	13, 14
Collating	10	16, 17
Composing Benches	10	16, 17
Cutting Machines	10	14
Electrotype Stores	15	16, 17, 29
Flat Bed Presses	10	16
Job Presses	10	16
Linotype Machines	5	16, 17
Meihle Presses	10	16
Newspaper Presses	10	16
Plating Rooms	5	20
Routing	10	38
Round House	5	16, 17, 22, 23
Silk Mills:		
Dyeing:		
Dry Rooms	10	13, 14
Wet Rooms	10	20
Doubling	15	16, 17
Examining	15	16, 17
Looms:		
Back	5	19
Front	30	14
Quiller	15	17
Single and Double Deck Winding	15	17
Spinning	15	17
Warping:		
Beam	10	19
Creel	10	19
Reed	20	14
Twisting	15	14
Steel Mills:		
Annealing Furnace	5	18
Bessemer Converter House	5	22, 23
Bessemer Blower-Platform	2	22, 23
Billet Storage Yards	1	22, 23
Blast Furnace	2	22, 23
Blooming Mill	10	18
By Product Ovens	1	22, 23
Chipping	30	18
Cold Rolling	15	18
Cooling Table	10	18
Hot Mills	10	18
Inspection	15	18
Lay-out and Fabrication	10	18
Machine Shops	15	18
Nail Making	10	18
Open Hearth Casting Floor	5	18
Open Hearth Charging Floor	5	18
Open Hearth Mould Yards	0.5	22, 23
Outdoor Craneway Scrap Storage	2	18
Pickling	5	23
Pipe and Tube Mills	10	18
Pipe Threading	15	18
Power Plants	10	18
Puddling Furnaces	5	18
Rail and Structural Mills	10	18
Reheating Furnaces	5	18
Shearing	10	18
Shipping	5	18, 22
Soaking Pit	5	18
Stripping Yard	1	18
Thoroughfares	0.2	22, 23
Tinning	10	18, 22, 23
Tin Plate Soaking and Inspecting	15	38
Warehouses	2	22
Wire Drawing	15	18
Warehouses	2	22, 23
Watchman's Circuits	1	22, 23
Watchman's Gate	1	22, 23

*For these lights, maximum brightness of the unit is the desirable quality and not foot-candles on a definite plane.

Price data on IN-BILT equipment listed on page Nos. 10-11

Holophane No.	List Price Each	Sched.	Std. Quant.	Page
A-765	$25.00	L	1	35
B-2110-R	6.00	R	12	38
B-2120-R	8.00	R	8	38
B-2170-R	8.25	R	8	38
B-CSE-75-R	4.40	R	10	38
B-CSE-100-R	4.75	R	8	38
B-CSI-75-R	4.40	R	10	38
B-CSI-100-R	4.75	R	8	38
B-XE-25-R*	3.90	R	20	38
B-XE-40-R*	4.05	R	10	38
B-XE-60-R*	4.15	R	8	38
B-XF-25-R*	3.90	R	20	38
B-XF-40-R*	4.05	R	10	38
B-XF-60-R*	4.15	R	8	38
B-XI-25-R*	3.90	R	20	38
B-XI-40-R*	4.05	R	10	38
B-XI-60-R*	4.15	R	8	38
C-1011	9.40	I	3	38
C-1211	11.50	I	3	38
C-1411	18.75	I	3	38
C-2110-R	5.80	R	12	25
C-2120-R	7.50	R	8	25
C-2130-R	14.00	R	4	25
C-2133-R	14.00	R	4	25
C-2140-R	20.00	R	3	25
C-2140-6″R	20.00	R	3	25
C-2143-R	20.00	R	3	25
C-2143-6″R	20.00	R	3	25
C-2170-R	8.00	R	8	25
C-2172-R	8.00	R	8	29
C-2180-R	14.50	R	4	25
C-7326-R	17.50	R	5	36
C-7346-R	24.00	R	4	36
CE-900	14.00	R	4	28
CE-910	20.00	R	3	28
CF-100-R	12.50	R	5	26
CF-200-R	18.00	R	4	26
CF-300-R	19.00	R	3	26
CF-500-16″-R	42.00	R	2	26
CSE-75	1.40	R	10	38
CSE-100	1.75	R	8	38
CSE-100-BC	4.00	I	8	14
CSE-200	3.40	R	6	38
CSE-200-BC	5.90	I	6	14
CSI-75	1.40	R	10	38
CSI-100	1.75	R	8	38
CSI-200	3.40	R	6	38
C-CSE-75	4.20	R	10	38
C-CSE-100-R	4.55	R	8	38
C-CSI-75-R	4.20	R	10	38
C-CSI-100-R	4.55	R	8	38
C-XE-25-R*	3.70	R	20	38
C-XE-40-R*	3.85	R	10	38
C-XE-60-R*	3.95	R	8	38
C-XF-25-R*	3.70	R	20	38
C-XF-40-R*	3.85	R	10	38
C-XF-60-R*	3.95	R	8	38
C-XI-25-R*	3.70	R	20	38
C-XI-40-R*	3.85	R	10	38
C-XI-60-R*	3.95	R	8	38
D-729-L	20.00	L	1	35
D-729-T	20.00	L	1	35
F-100-R	$14.00	R	5	26
F-200-R	19.00	R	4	26
F-300-R	20.00	R	3	26
F-500-16″-R	42.00	R	2	26
F-500-18″	60.00	R	1	26
H-2076-S	5.00	I	8	17
H-755-FL	20.00	L	1	35
H-755-TF	25.00	L	1	35
H-CSE-100	3.50	I	8	14
H-CSE-200	4.90	I	6	14
HF-739	14.00	L	4	35
J-729	18.50	L	4	35
R-500	29.00	R	4	27
R-1000	50.00	R	4	27
R-1000-V	63.50	R	1	27
R-1000-VM	75.00	R	1	27
RN-300	17.00	R	4	27
RP-500	29.00	R	4	27
RP-1000	50.00	R	4	27
S-2110-R	7.80	R	12	25
S-2120-R	9.50	R	8	25
S-2130-R	16.00	R	4	25
S-2133-R	16.00	R	4	25
S-2140-R	22.00	R	3	25
S-2140-6″R	22.00	R	3	25
S-2143-R	22.00	R	3	25
S-2143-6″R	22.00	R	3	25
S-2170-R	10.00	R	8	25
S-2180-R	16.50	R	4	25
S-7326-R	20.00	R	5	36
S-7346-R	28.00	R	4	36
SE-900	16.00	R	4	28
SE-910	22.00	R	3	28
SL-200	12.00	R	4	28
ST-200	12.00	R	4	28
T-981-3	25.00	R	1	31
Wire Guards				38
X-2203-R-2	19.50	I	4	21
X-2323-R-2	23.45	I	4	21
X-2203-R	8.50	I	8	21
X-2323-R	10.60	I	8	21
XE-25	.90	R	20	38
XE-40	1.05	R	10	38
XE-60	1.15	R	8	38
XF-25	.90	R	20	38
XF-40	1.05	R	10	38
XF-60	1.15	R	8	38
XI-25	.90	R	20	38
XI-40	1.05	R	10	38
XI-60	1.15	R	8	38
0222	3.50	I	8	21
0223	9.50	I	4	21
0224	4.00	I	8	21
0225	10.25	I	4	21
0227	5.45	I	8	21
0229-S	12.55	I	8	21
0231	3.50	I	20	20
0232	4.50	I	8	20
0233	4.50	I	4	20
0234	4.00	I	8	20
0234-L	4.00	I	8	20
0238	4.00	I	4	20
0240	$4.50	I	8	
0250	5.00	I	4	
02076	4.50	R	8	
02176	5.50	R	8	
02180-A-S	11.50	I	4	
02208	6.30	I	20	
02223-Cry.	8.75	I	8	
02223-Gr.	9.85	I	8	
02223-Ruby	10.95	I	8	
02328	8.15	I	8	
02338	11.75	I	4	
02353-Cry.	15.85	I	8	
02353-Gr.	16.95	I	8	
02353-Ruby	18.05	I	8	
02368	9.00	I	8	
02378	11.00	I	4	
02470	9.25	I	8	
02470-BC	6.25	I	8	
02470-S	7.25	I	8	
02472	9.25	I	8	
02472-BC	6.25	I	8	
02472-S	7.25	I	8	
02476	8.65	I	8	
02476-BC	5.65	I	8	
02476-S	6.65	I	8	
02480	16.10	I	4	
02486-S	13.45	I	4	
02490-JDW	18.60	I	4	
02490-S	13.45	I	4	
0362	2.00	I	8	
0362-L	2.00	I	8	
0363-BC	1.00	I	8	
0365	1.00	R	8	
0366	1.25	R	8	
0369	3.00	I	4	
0369-L	3.00	I	4	
0370	2.50	I	4	
0383‡	30.00	R	1	
0386‡	22.00	R	2	
0405	22.00	R	2	
04177-VF-A	41.50	R	4	
04333-VF-A	39.00	R	4	
04338-A	24.80	R	4	
04376-A	25.80	R	4	
04377-A	26.80	R	4	
043384	39.90	R	4	
043774	41.90	R	4	
0480‡	5.00	R	5	
0481‡	6.00	R	4	
0482‡	7.00	R	3	
0484	11.00	R	5	
0485	15.00	R	4	
0500‡	3.50	R	5	
0501‡	5.00	R	4	
0502‡	6.00	R	3	
0503	8.50	R	5	
0504	11.00	R	4	
0551	2.60	I	8	
0571‡	4.80	R	12	
0571-A	1.95	I	12	
0572‡	5.00	R	8	
0573‡	5.50	R	4	

*Add 10% to list price if velvet finish is to be furnished.
‡These units are packed in individual cartons.
§Exposed type.
§§Flush type.

NOTE:—Chain Hangers can be furnished on flector Refractors (page 25) and F lites (page 26) at no increase in p

Holophane No.	List Price Each	Sched.	Std. Quant.	Page
0574‡	$7.00	R	3	25
0575‡	7.00	R	3	25
0578‡	6.00	R	4	25
0591‡	2.80	R	12	25
0592‡	3.00	R	8	25
0593‡	3.50	R	4	25
0594‡	5.00	R	3	25
0595‡	5.00	R	3	25
0596‡	3.50	R	8	29
0598‡	4.00	R	4	25
0641	2.45	I	8	14
0643	1.85	I	8	14
0644	3.35	I	6	14
0650	2.50	I	8	14
0651	2.00	I	6	14
0654	2.50	I	8	14
0655	3.50	I	8	14
0656	3.00	I	6	14
0657	2.00	I	8	14
0660	2.00	I	8	17
0671	3.50	I	5	19
0672	3.50	I	5	19
0672E	4.25	I	5	19
0673	4.25	I	5	19
0674	10.45	I	4	19
0674E	10.45	I	3	19
0675	10.45	I	3	19
0685	3.85	I	4	13
0700	1.50	R	8	31
0701	1.00	R	8	31
0865	3.60	R	4	23
0866	5.75	R	4	23
0867	13.35	R	4	23
0873	20.00	R	4	21
0875	5.80	R	8	23
0878	8.00	R	4	23
0881-A	16.80	R	4	23
0882-A	25.00	R	4	23
0890	5.50	R	8	23
0891	4.50	R	8	23
0897	5.50	R	8	23
0904	3.50	R	8	23
0905	3.50	R	8	23
0936	.65	I	8	14
11 M.S.L.S§	220.00	L	1	34
11 M.S.L.S§§	270.00	L	1	34
1108-S or C	8.75	I	8	16
1245	7.90	R	4	21
15 M.C.L.S.	735.00	L	1	33
18 M.C.L.S.	785.00	L	1	33
21 M.C.L.S.	930.00	L	1	33
2076	3.50	R	8	29
2110‡	3.00	R	12	25
2120‡	4.50	R	8	25
2130‡	10.50	R	4	25
2133‡	10.50	R	4	25
2140‡	15.00	R	3	25
2140-6″‡	15.00	R	3	25
2143‡	15.00	R	3	25
2143-6″‡	15.00	R	3	25
2170‡	4.50	R	8	25
2172‡	4.50	R	8	29
2176‡	4.25	R	8	29
2180‡	$10.50	R	4	25
2180-A	9.00	I	4	16
2203-R	5.00	I	8	21
2208	2.80	I	20	20
2223-Crys.	3.30	I	8	21
2223-Green	4.40	I	8	21
2223-Ruby	5.50	I	8	21
2323-R	6.60	I	8	21
2328	3.65	I	8	20
2338	7.25	I	4	20
2353-Crys.	3.30	I	8	21
2353-Green	4.40	I	8	21
2353-Ruby	5.50	I	8	21
2368	4.50	I	8	20
2378	6.00	I	4	20
2470	5.25	I	8	16–20
2472	5.25	I	8	20
2476	4.65	I	8	20
2480	12.10	I	4	20
2486‡	10.45	I	4	17
2490‡	10.45	I	4	16
3 D.S.L.S.	On application			34
485	18.00	I	4	27
485-H	18.00	I	4	27
4177-VF	16.50	R	4	23
4333-VF	14.00	R	4	23
4334	5.00	R	8	23
4337	3.50	R	8	23
4338	8.00	R	4	23
4376	9.00	R	4	23
4377	10.00	R	4	23
5 M.S.L.S.§	100.00	L	1	34
5 M.S.L.S.§§	120.00	L	1	34
622‡	9.55	I	5	19
622-AL‡	12.05	I	5	19
6484	7.45	I	8	14
6488	4.95	I	8	14
6488-BC	8.45	I	8	14
652‡	11.50	I	5	19
652-AL‡	14.00	I	5	19
6522	6.05	I	5	19
6522-AL	8.55	I	5	19
653	2.10	I	8	14
653-AL	3.60	I	8	14
6531	3.90	I	8	14
6531-AL	5.40	I	8	14
6533	3.30	I	8	14
6533-AL	4.80	I	8	14
654	3.10	I	6	14
654-AL	5.10	I	6	14
6541	4.90	I	6	14
6541-AL	6.90	I	6	14
6543	4.30	I	6	14
6543-AL	6.30	I	6	14
6552	7.25	I	5	19
6552-AL	9.75	I	5	19
6573	1.45	I	8	14
6573-AL	2.95	I	8	14
6575	2.45	I	6	14
6575-AL	4.45	I	6	14
6583	7.60	I	6	14
6583-AL	10.10	I	6	14
6585	$3.85	I	4	13
6585-AL	6.05	I	4	13
6586	3.85	I	4	13
6586-AL	6.05	I	4	13
6588	4.25	I	6	14
6588-AL	6.75	I	6	14
6671	6.05	I	5	19
6671-AL	8.55	I	5	19
6681-AL	11.50	I	5	19
6690-AL	19.80	I	3	19
6691-AL	19.80	I	4	19
6692-AL	19.80	I	3	19
671‡	9.55	I	5	19
681-Clear	11.50	I	5	19
681-AL	15.75	I	5	19
681-ALW	29.50	I	5	19
685	7.70	I	4	13
685-AL	9.90	I	4	13
686	7.70	I	4	13
686-AL	9.90	I	4	13
687	9.85	I	4	15
687-AL	12.05	I	4	15
690-AL	30.25	I	3	19
691-AL‡	30.25	I	4	19
691-AL-W	44.00	I	5	19
692-AL	30.25	I	3	19
693-AL	30.25	I	3	19
695	24.50	I	3	15
695-AL	27.50	I	3	15
7 M.S.L.S. §	140.00	L	1	34
7 M.S.L.S.§§	170.00	L	1	34
7180-A	14.00	R	4	27
7184	4.00	R	4	21
7190-A	20.00	R	4	27
7322‡	9.00	R	5	26
7326‡	9.00	R	5	36
7344‡	13.00	R	4	26
7346‡	13.00	R	4	36
7366	20.00	R	2	26
7388	30.00	R	1	26
741	14.50	I	6	27
742‡	24.00	R	4	37
830‡	8.00	R	8	23
832‡	10.50	R	8	23
833	10.50	R	8	23
834	7.00	R	8	23
835	7.00	R	8	23
913	6.20	R	8	31
914	6.85	R	8	31
916	4.75	R	8	31
922‡	4.50	R	8	31
935	6.00	R	8	31
938‡	6.00	R	8	31
940	4.40	R	8	31
944‡	6.00	R	8	31
946	6.45	I	8	16
946-Blue	7.00	I	8	16
947	7.00	I	8	16
947-Blue	7.55	I	8	16
963	3.00	R	8	31
981	2.00	R	30	31
983	3.00	R	8	31

*Add 10% to list price if velvet finish is to be furnished.
‡These units are packed in individual cartons.
§Exposed type.
§§Flush type.

NOTE:—Chain Hangers can be furnished on Reflector Refractors (page 25) and Filterlites (page 26) at no increase in price.

Engineering Service

For new or old buildings, every Holophane Installation is Custom built, after a survey by Holophane lighting engineers. Plans, specifications and costs are submitted in advance, entirely without obligation to the prospective client. This service is available anywhere in the United States.

The prices and data in this publication are for the convenience of customers. Every effort is made to avoid error, but this Company does not hold itself responsible for any errors or omissions. . . . Both prices and data are subject to change without notice.

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HOLOPHANE DATA CATALOG • A. I. A. File No. 31/23

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3946 K ST.
PHILA. PA.
DELAWARE 4479

Rumsey Elec. Co.